

# University News

• MONDAY, MAY 3, 1993

Rs. 5.00

## Amravati Varsity Convocation



Shri R. Venkataraman, former President of India, who delivered the convocation address, receiving the D Litt. degree (Honoris Causa) from Dr. P C Alexander, Governor of Maharashtra and Chancellor of Amravati University Dr. G V Patil, Vice-Chancellor, is on the extreme right.

# Aligarh Muslim University, Aligarh

## Admission Notice No. V

Session - 1993-94

Applications on prescribed forms are invited from eligible candidates for admission to the following courses for the session 1993-94. The last date for receipt of completed application forms in the Admission Office of the University is mentioned against each course.

S.No.	Course	Last date for receipt of applications
1	B.A./B.Sc./B.Com.(Hons) Part-I	10 07 1993
2	M.A./M.Sc./M.Com./LL.B./LL.M./D.B.A./B.Th./M.Th	
	<b>PROFESSIONAL COURSES</b>	
	Diploma in Electronic Data Processing & Machine Operation/ Pest Management/Museology/Company Law & Banking Insurance/Labour Law & Labour Relations/Criminology & Criminal Administration/Lab Technology (Physical & Chemical)/ Medical Lab Technology (Radiology)/Gem Testing & Art of Lapidary/Orthoptics/Journalism/Applied Art/Instrument Technology/ Medical Lab. Technology (Pathology/Microbiology/ Biochemistry)/Cartography/Pisciculture/ Pharmacy/Horticulture/ Physiotherapy & Rehabilitation/Operation Theatre Management/ Optometry/Dialysis Techniques/Computer Applications/Certificate in Dental Hygiene/Certificate in Functional Hindi	15 07 93
3	M.Sc Engg Civil/Electrical/Mechanical/Electronics/Chemical (Petroleum Processing)	15 07 1993
4	Diploma in Costume Design & Dress Making/Diploma in Office Assistantship & Secretarial Practice	15 07 1993
5	Post M Sc Diploma in Museology/Post M A Diploma in Teaching of English Language and Literature/Post M.A Diploma in Urdu Translation/P G Dip in Strategic Studies/Diploma in Personnel Management/Marketing Management/Diploma in Steno-Typing/ Diploma of Teaching (Urdu Medium)/ Diploma in Computational Mathematics/PG Diploma in Translation in the Department of Hindi	17 07 1993

Full particulars regarding the courses are given in the Guide to Admission No 1 obtainable through post from

**The Deputy Controller (Admissions)**  
Post Box No. 52,  
A.M.U., Aligarh-202002 (U.P.)

by sending a crossed Indian Postal Order for Rs 10/- drawn in favour of the Finance Officer, A M U , Aligarh alongwith a self-addressed envelope of 25 x 15 cms in size affixing postage stamps worth Rs 15/- for sending the required material through Registered Post The University is not responsible for any postal delay

**THE APPLICATION FORM AND RELEVANT GUIDE TO ADMISSION WILL BE AVAILABLE FROM THE SECOND WEEK OF MAY, 1993**

Dated : 20.04.1993

**Najma Akhtar**  
Controller of Exams. & Admissions

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Editor :  
SUTINDER SINGH

## Financial Crisis in Central Universities

P. Muralikrishna\*

A major policy change is taking place in the funding pattern of the central universities and other deemed universities. The resource crunch, bordering on financial crisis, which these institutions are presently facing, is mainly due to the fact that the change is sought to be introduced without adequate notice and without assessing the preparedness of the universities for such a change. However, if viewed in proper spirit and the national policy perspective, this difficult situation can be considered by the universities as an opportunity to extricate themselves from a position of helplessness – looking always to govt patronage for survival – into a refreshing model with more financial autonomy and freedom to pursue their goals with more confidence. An attempt is made here to study the existing pattern of funding, changes in the offing and the steps to be taken to meet the new situation. The suggestions made here, though intended mainly for the Central Universities, are equally applicable to all institutions of higher learning.

### I

A university can be established by an Act of a State Legislature or Parliament. The universities established by State Legislatures are called the State Universities which are to cater to the needs of the various regions in the State. Universities which are established by an Act of Parliament are called Central Universities. At present there are 10 of them. These universities are established to strive for excellence in the fields of teaching and research. They are meant to have an all-India character reflected in the mode of admissions and appointments, and in the nature of courses and programmes. These central universities have been provided with necessary freedom and flexibility to achieve their objectives. In addition there are eight deemed universities which receive full maintenance grant from the UGC every year.

State universities are funded by the state governments concerned. UGC grants to these institutions are mainly for developmental activities. On the other hand the entire expenditure of the central universities and deemed universities has to be met by the central government both for their maintenance and development. The UGC has an obligation to meet the entire expenditure of these central and deemed universities. Of the 10 central universities, Indira Gandhi National Open University (IGNOU) receives funds directly from the central government and the remaining nine Universities (and also deemed universities) receive funds from the UGC.

### Finance Committee

Each central university has a statutory Finance Committee comprising, apart from others, representatives of the UGC and the Government of India (MHRD). The Finance Committee generally meets in the month of October and approves the budget for the next year taking into account the requirements of various departments and sections. While determining the budget, the Finance Committee takes into consideration the amounts spent on each item of expenditure in the previous year and makes suitable provision for the next year keeping in view the current needs and the cost escalator.

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Normally for each item of expenditure about 10% increase, over the last year's expenditure, is permitted. Since the representatives of both the UGC and the government are associated with budget-making of the universities, the budget proposals of the central universities are generally approved in toto and amounts sanctioned accordingly. The problems for the central universities started only from the year 1990-91 due to financial restrictions imposed by the central government on non-plan expenditure in all government departments and autonomous bodies maintained by it.

### **Liberal Facilities**

The exact amount of grant payable for maintenance of a central university is determined on "covering the deficit" basis i.e. income generated by the university is deducted out of the actual expenditure incurred and the remaining amount sanctioned. The pattern of funding until recently was that roughly about 50% of the grant is towards the salaries of the staff and the remaining 50% for meeting the other expenses of the university for maintaining library, laboratories and other essential services and also to run house keeping functions. Since substantial amounts were provided for expenditure other than salaries, central universities could build up excellent facilities in terms of lab, library, scientific equipment, computer facilities, etc. Central universities could therefore attract best talent available in the country in relation to both students and faculty with the result that these could live up to their reputation and expectations.

### **Lack of Motivation**

Since the central universities were funded on "covering the deficit" basis, certain unhealthy trends crept in. Some of them are enumerated below.

i) Since the income generated internally in the university is deducted from the total expenditure, there is no motivation for any university to generate additional resources or income. If a university generates additional income by its innovative methods, the grant is proportionately reduced as the entire income is deducted from the grant payable to a university.

ii) Since the criteria for sanction is based on the expenditure incurred during the previous year, universities tend to utilize all the amounts sanctioned to them, even though such expenditure may not be really warranted.

iii) Since the public funds could not be utilised to accumulate reserves, no university can build up reserves out of the maintenance grant paid to it, therefore the tendency is to spend the amounts whether necessary or

not. That is, there is no obligation or compulsion to economise on its expenditure.

iv) The whole emphasis of the funding of the central universities is based on the expenditure incurred in the previous year rather than on actual need and performance to be achieved during the current year.

From 1990-91 onwards, the central government imposed cuts in the maintenance grants of its departments and institutions funded by it. Therefore the funds provided to the central universities were also substantially cut resulting in serious difficulties to its funded institutions. Since prior intimation was not given about these cuts, tremendous difficulty was faced by central universities in coping with the cuts imposed on their budgets. Representations have been made by the central universities to the UGC and the government and several meetings held to overcome the situation faced by them.

### **High-Power Panel**

It was in these circumstances that the UGC, on the advice of the government, constituted a high powered committee under the chairmanship of Justice K. P. Narasimhaiah, Retd. High Court Judge of A.P. A cursory look at the terms of reference of the committee shows that the UGC wants a wholesale change in the funding pattern of the central universities. The exact recommendations of the committee will be known only when the Committee submits its reports, but it may not be difficult to foresee what the recommendations would be like. It is likely that the committee, based on some criteria, may suggest for a certain sum which would grossly be inadequate to meet the actual expenditure. The central and deemed universities should not be caught unawares in such a situation. Each university should apply its mind right from now so that it can meet the situation without any difficulty. Since there would be large gap between the grants sanctioned to a university and its requirements, each university may have to resort to either reducing the expenditure or increasing its internal resources. The universities have already begun some sort of exercise to curb wasteful expenditure because of government restrictions from 1990-91 onwards and there may not be much scope to reduce the expenditure further. Therefore the only alternative left is to substantially increase the internal resources of the universities to cover the deficit.

## **II**

What the Finance Minister appears to be contemplating to do in the case of universities today is no way materially different from what Mrs. Margaret Thatcher did in Britain several years ago. After initial



shock and dismay, British universities responded admirably and could survive the budgetary rigours imposed on them. If it could be done in Britain, it can as well be done in our country. What is important and needed is that the universities should free themselves from the shackles of the age-old financial rules and procedures. The statutory audit should be limited to the grants sanctioned by the government only. The extra money generated by the university should not be subjected to the statutory audit. Of course each university must have its own mechanism of auditing the amounts generated. The theme of the song should be to encourage the universities to tread new and innovative paths and its freedom should not in any way be restrained in the name of procedures and rules. Then only the few suggestions listed hereunder can work satisfactorily.

### **Financial Management**

Considerable amount of money can be generated by intelligently placing the extra funds in various investments. At any point of time each university has large sums of money available in one form or another. It may be caution deposits, project fund, special earmarked funds or advance grant received from the government. All monies are not needed all the time. Since interest can be earned even on 46-days deposits, some of these amounts can be placed in fixed deposits and other investments for varying periods depending on the needs. For example, extra money can be kept in Units now to avail the Rights announced by Unit Trust of India (UTI) and get maximum benefit.

### **Foreign Money**

#### *Admission of Foreign Students*

Of late students of Gulf and African countries are showing interest in getting admitted in Indian universities because of low cost of education here. Government of India is also encouraging them as it would earn valuable foreign exchange. Universities may avail of the opportunity to earn good income. Fee structure for them can be substantially higher than that for the local students.

#### *International Conferences*

Providing facilities for organising international conferences and seminars can be quite rewarding in terms of income. Many international associations are looking towards third world countries for organising these because of high cost in developed countries. Universities having infrastructural facilities – conference halls of different sizes, guest house and hostel facilities etc., and good communication system – FAX, TELEX, ISTD

facilities – can certainly look for this source to earn substantial amounts.

### **Teachers Expertise**

#### *Distant Education*

Already several universities have been running correspondence courses in profitable manner. Two things should be kept in mind while attempting to run correspondence courses. These courses should not in any way dilute the standards of a university. The courses taken up by the university should have immediate applicability and employability. Then only the courses can become popular and can generate good income. Postgraduate diplomas and certificate courses in chosen areas can be tried. Courses in computer science are immensely popular everywhere. Universities can run one-year postgraduate Diploma courses and certificate courses in Data Entry Operation, auto CAD, UNIX, Cobol and C-languages which are in demand. Universities can run specific management courses like travel management, health management, hotel management, etc. Courses in journalism, mass communication are popular. Similarly Lab Technician courses. Each university has to develop its own courses depending on the expertise and facilities available.

#### *Part-time and Evening Courses*

Some of the existing programmes of the university can be converted into part-time and evening courses and run profitably. For example M Phil courses and one-year postgraduate diploma courses can be taken up under this category.

#### *Individual Research Projects Funded by Govt Agencies*

This practice is already accepted and recognised as legitimate activity of the teachers. Several govt agencies like UGC, CSIR, DBT, DST, DAE, Planning Commission and such other government agencies encourage individual research projects of the teachers. Each teacher depending on the size of the project can take up 2-3 projects simultaneously and earn money for their library and lab equipment. It is not difficult to find a sponsor for any worthwhile project. The area of research can also be in his own field. Upto 15% of the sanctioned project money can be kept by the university for offering its facilities to the teacher.

#### *Sponsored and Collaborative Research*

Instead of individual projects, university as a whole can take up any major project involving more than one teacher and sometimes involving more than one department. Similarly university can collaborate with other institutions/universities and can take up major projects.

### *Projects for the Industry*

Of late there is lot of talk about it. But it is easier said than done. To get any support from the Industry, one has to re-orient the expertise available with the university to suit the needs of the industry. That is to say, teachers have to change their area of research activity from basic research to the applied areas. No industry pays unless the work done by the university can readily be put to use by them.

### *Consultancy*

Each teacher can be encouraged to offer his services and expertise for a price to take up specific problems of any institute or agency. A substantial part of the amount generated can be allowed to be kept with the teacher. Certain ground-rules may have to be formulated by each university in this regard.

### *Lending of Central Facilities*

Each university over the years has acquired certain facilities for use of its teachers and students. These facilities can be offered on hire selectively to generate income. Some of them are

#### *Computer Facility*

Every university has some big or small computers. Spare computer time can be utilised for job work to earn extra money. If necessary, operating staff of computers can be made to work on shifts and suitably compensated for the services rendered by them.

#### *Scientific Equipment*

Each university possesses sophisticated equipment acquired from time to time – like Liquid Nitrogen and Liquid Helium Plants – which are not easily available outside. These facilities can be thrown open to public for a price.

#### *Library*

Library facilities can also be made available to the public on payments basis.

#### *Workshop*

Certain universities have large workshops maintained for classroom requirements. The workshop staff can be persuaded to undertake job work to earn some money.

#### *Nursery*

Many universities are maintaining large nurseries for the horticultural operations. The facilities available can be utilised for raising decorative and fruit plants which can fetch fancy prices if sold to outside agencies.

### *TV Studio*

Some universities have established TV studios for their mass communication students. There is heavy demand for these facilities. By offering the facility on hire, universities can generate handsome amounts.

### *Utilisation of Physical Facilities*

The physical facilities available with the universities can also be given on hire. Some of such facilities are given below.

#### *Hostel and Classroom Facilities*

Every university observes two months summer and one month winter vacation. During this period hostel and classroom facilities can be hired to outside parties for conducting seminars, symposia, etc. Even otherwise, hostel rooms can be rented out during the vacation at a much cheaper rate than hotels and earn some money.

#### *Horticulture Operations*

Many universities have large campuses with lot of unutilised land which can be put to good use to generate substantial amounts.

##### *– Long Term Plantation*

If the university has no plans to utilise the extra land for the next 20-25 years, it can be used for raising teak-wood or rose-wood plantation which will generate huge profits with minimum input costs.

##### *– Mid-Term Plantation*

On the other hand if the spare land available is only for about 10 years, the university can resort to fast growing plantation like Subabul, Eucalyptus and other varieties. The Dept of Non-conventional Energy, Govt of India provides money for raising this type of plantations.

##### *– Short-Term Plantation*

If the extra land available is for a short term of about 2-3 years, depending on the nature of the soil, universities can take up rose gardens, vegetable gardens, etc.

Similarly each university can think of its own avenues to generate money depending on the resources available. Some of the ready options of enhancement of tuition fees, exam fees, hostel fees, etc. are not suggested as in the present circumstances it is difficult to implement them without the support of the govt. Any decision taken in this regard should be at the initiative of the govt which should uniformly be made applicable to all universities. Then only it would be possible to tap such avenues.

# Issues in Higher Education

## A Report on Vice-Chancellors' Conference

P.R. Dubhashi\*

The 67th Annual meeting and Vice-Chancellors' conference was held recently at Pondicherry University under the auspices of the Association of Indian Universities (AIU) and the UGC. More than 120 Vice-Chancellors from all over India participated in the conference.

The AIU conference was inaugurated by the Governor of Tamil Nadu Shri Bhushma Narain Singh and was addressed by the Education Minister of Pondicherry Shri A. Gandhiraj. The inaugural session was presided over by the past President Dr. (Ms.) A.S. Desai who delivered the presidential address.

After the inaugural session, the AIU had a business session. This was followed on the next day by the AIU seminar on "Excellence and Social Relevance in Higher Education".

In her presidential address Dr. Desai dealt with two basic themes of the conference viz. "Social Relevance in Higher Education" and the "Finance of Higher Education". Both these subjects are of very great importance at the present state of higher education in our country.

### Excellence and Relevance

As Dr. Desai pointed out, our universities have to be a source of excellence not only in the professional sense but in the sense that this excellence must be exhibited in the shape of universities sharing their knowledge with the outside world beyond the university walls. This means that for higher education to be relevant, universities must develop linkages with the community through a two-way process where knowledge is extended to the community and the problems of the community are reflected in teaching and research. To develop this two-way process, extension activities should be a part and parcel of the university. Extension has been an integral part of the activities of institutes of social work like Tata Institute of Social Sciences, deemed universities of higher education like the Avinashilingam Institute of Home Science and Higher Education for Women at Coimbatore, Gandhigram Rural Institute of Madurai, the SNDT Women's

University and the agricultural universities. The universities on the traditional pattern have yet to give a proper place to extension in their system.

It is with this in view, that the conference had arranged presentation of case studies of extension work done by the four university institutions, two of them the traditional universities, namely the Mangalore University and Sardar Patel University and SNDT Women's University at Bombay and the Gandhigram Rural Institute.

Mangalore University has traditional courses but it has taken up a number of extension projects in the field, dealing with the problems of pollution, supply of drinking water to the villages, 100% literacy programme, village development programme, and industry supported research relating to local issues in South Kanara district.

Sardar Patel University at Vallabh Vidya Nagar has an active NSS programme and has taken science and technology to rural environment. The university teachers are in close contact with local development agencies and have taken up relevant social work.

SNDT Women's University has taken up education programme which is linked to community. Its project of Adult and Continuing Education is closely connected with community development. It has taken research programmes in fields like sanitation. It has also tried to bring social awareness in the society.

Professor Desai herself in her address suggested that the universities should undertake training programmes for small and marginal farmers, labourers, women, low level government servants and rural workers engaged in rural development, etc.

University-business-industry linkages should also be promoted. Knowledge has to be socially relevant and this must be reflected in teaching and research. All this would require recasting of syllabi and curricula to make them relevant and application-oriented. The restructured programmes should contain separate elements of foundational, core and applied courses. It is also necessary to introduce innovative methods.

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Above all, the teachers and students should be made sensitive to the basic needs of the society in order to develop social relevance in education. Every student and teacher in an university must understand that knowledge must reach down to the community and must be related and responsive to the society. Knowledge should be combined with the promotion of socially relevant values. Not only social sciences and management but even knowledge of physical and natural sciences could be brought to bear on the problems of the village community.

#### **Finances**

If knowledge is worth anything and if the universities are making a contribution to the development of the society then they are entitled to make a claim on the society for their finances. Dr G. Ram Reddy, Chairman, UGC stated in his introductory remarks that higher education is an "engine of development". The engine cannot be deprived of the fuel! In other words universities cannot be starved of finances. Sometime back a memorandum on University Finances was submitted by the AIU to the Prime Minister, Finance Minister and Human Resource Development Minister. If education is key to national development, then it is imperative that the allocation to education goes much beyond 3% of the national income at which it has stuck all these years. It is said that universities should enhance their own resources by charging higher fees. But if education is critical to the right to life, then education has to be affordable. Those who cannot afford to pay higher fees should have the support of schemes for loans on soft terms through banks but the university system cannot be burdened to provide these resources. The limited employment opportunities to those who pass out of the universities also make it difficult to introduce the system of loans at market rates to students from poorer sections of the society. There has to be an element of subsidy provided by the state in the loans given for higher education. The financial support from government should be consistent with the autonomy of the universities. They must be insulated from internal and external pressures – bureaucratic, political and others. The National Policy on Education has emphasised the need for higher allocation to education during the eighth five year plan onwards. It has recommended that allocation on education should exceed 6% of the national income. The basic maintenance grant to every university must be provided by the government. To ensure this a Special Finance Commission must be constituted to take into account the minimum needs of the universities. Sometimes the financing of higher education is sought to be

sacrificed at the alter of primary education forgetting that higher education in universities is necessary to produce teachers at secondary and primary levels.

All this brings out the need for fundamental thinking about the financing of the social sector in general and higher education in particular in the context of the new economic policy. The new economic policy relies on the market for allocation of resources. But education is not a marketed or a marketable service. It is a basic right. If market principles are to be applied then the principles of social accounting have to be adopted. The policy makers should undertake the exercise of social accounting, that is giving monetary value to education in terms of qualified manpower provided to the society and spin off of knowledge generated and disseminated from the universities. Those who run down the role of the universities in India do not stop to consider that if today India is endowed with qualified human resources needed by a modern economy and society, it is because of the wide range of educational programmes conducted by the universities.

All this does not mean that universities should not raise their own resources by raising fees. But a substantial raise in fees is not possible without a basic political consensus. Such consensus would alone provide the basis for raising of fees by the universities without disturbing their functioning. Resources can be raised through other sources like donations from industries and other private agencies. Donations to education now have 100% tax exemption. Now that this is done in the new budget, private donors may be expected to respond. At the same time, universities must set up internal mechanism to undertake performance assessment to ensure that their performance is adequate to justify the financial support.

#### **Code of Discipline**

The Vice-Chancellor, Gandhigram Rural Institute suggested a code of discipline for the university staff which is reproduced below :

- a) Everyday's work must begin with a prayer of all religions;
- b) One refresher course on Gandhian Thought for forty hours for all staff;
- c) One refresher course for all staff on 'India as a Nation';
- d) Organising a group called 'Students and Teachers Against Violence';
- e) Special programmes for women students and for disabled students and disabled staff;



- f) Students services, and counselling as an integral part of the educational institutions as recommended by the Kothari Commission,
- g) Acceptance of dignity of physical labour by all staff (and its demonstration in practical terms),
- h) Swadeshr;
- i) Total rejection of trade-unionism of teachers and non-teaching staff but at the same time encouraging teachers to form unions to promote community life and for scholarly pursuits,
- j) Students' associations for the purpose of teaching them norms of democratic functioning;
- k) Total rejection of the culture of misuse of judicial procedures and encouraging techniques of Gandhian arbitration to settle disputes;
- l) Insistence on discipline and complete honesty, and the Code of Ethics prescribed by the UGC,
- m) Acceptance of community and extension work by all members of the staff; and
- n) A totally alcohol-drug and tobacco free campus

The suggested code deserves to be circulated among

the staff, faculty and students, discussed and adopted with such modifications as they would agree to.

#### **Sri Anrobindo's Approach to Education**

On the day of my departure I visited Sri Aurobindo Ashram and Centre for Education. I found that the educational system there was entirely different from the traditional system. Here the students are not divided between classes but between age groups. Each group has free choice to select subjects of their interest. They are free to work according to their talents. There is a close relationship between the teacher and the student. there are no formal examinations at the end of their term to assess their performance. There was no system of providing any certificate at the end of the final examination until at the instance of the late Dr C.D. Deshmukh, then UGC Chairman, when Mother agreed that certificates would be issued to enable the students to get entrance to institutes of higher education. In spite of such a free and flexible system the education at the Ashram has produced some very accomplished students who today hold with distinction higher positions in government and elsewhere

## **INSTITUTE OF PHYSICS**

(An autonomous research institute under the Department of  
Atomic Energy, Government of India)

P.O. Sainik School, Bhubaneswar-751005, Orissa.

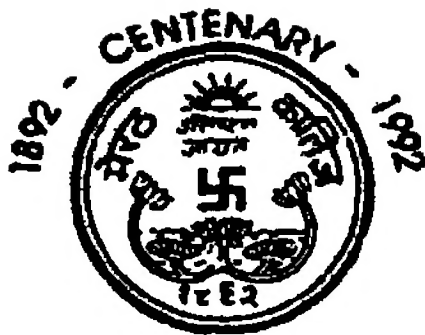
### **PREDOCTORAL (POST-M.SC.) COURSE IN ADVANCED PHYSICS**

Applications are invited for the one year Predoctoral (Post-M.Sc) Course in advanced physics sponsored by the Institute of Physics, which is to commence from August 1, 1993. The prime objective of this programme is to train scholars in the methodology of theoretical and experimental research in physics. Selection for academic year 1993-94 will be made on the basis of the candidate's academic record upto M.Sc. and their performance in written and oral tests to be held in Bhubaneswar in the first week of July, 1993. The basic requirements for admission are exceptional talent and motivation for research.

Candidates who are keen to pursue a research career and who have an outstanding academic record need only apply. Candidates should have completed Master's Degree in physics before joining this programme (but students who have appeared for the final M.Sc. examination may also apply). Those selected candidates will receive a fixed fellowship of Rs. 2500/- per month. Scholars who successfully complete the Predoctoral Course may be considered for enrolment as Doctoral Research Scholars under faculty members of the Institute subject to availability of doctoral positions, leading to Ph.D in physics to be awarded by Utkal University and they will be paid monthly fellowship ranging from Rs. 2500/- to Rs. 2800/- with annual book grant, etc. which is renewable annually upto 5 years subject to satisfactory performance.

The prescribed application form and prospectus containing more details about fields of study, etc. can be obtained from the Administrative Officer (Academic), Institute of Physics, Bhubaneswar-751005. Completed form should reach the AO(A) by 1st June, 1993. Candidates called for interview will be paid single round trip second class train fare through shortest route.

**DIRECTOR**



## A LITTLE ACORN, A GIANT TREE Meerut College Centenary 1892-1992

M.S. Rana\*

Great institutions have been founded at the spur of the moment and the Meerut College is no exception to it. This day (22 Feb.) in 1892 a galaxy of senior citizens and civil officers of this mofussil town and cantonment under the title of "Meerut College Association" met in a conclave at the red-brick Connaught Hall, an imposing civic centre of those days. The high gentry of the town might have arrived in their richly upholstered Victorias and Landaus to the momentous meeting. The one point agenda was "of providing the younger generations with a seat of modern learning in their own home." By this time the country had five universities and 33 colleges. The Maharaja College, Mysore was the first to be set up in 1850-51 and the Holkar Science College, Indore (1891) was the thirty-third in the string of college education in the nineteenth century India. The Meerut College might have been the thirty-fourth in the country. It may be a sheer coincidence that the founding fathers of college education in Meerut also consisted of a gifted group of thirty-four. The meeting was presided over by Mr A H Harington, C.S., Commissioner Meerut Division. *Inter alia*, it consisted of Mr E. White, Director, Public Instruction, Mr M.J. White, Collector Meerut, Mr Bouflower, Inspector of Schools, Sheikh Hafiz Abdul Karim, Khan Bahadur, C.I.E., Hon'ble Rai Bahadur Lala Nihal Chand, Khan Bahadur Nawab Asadullah Khan, Babu Prahlad Singh, Rai Bhadur Lala Krishna Sahai, Mr Piyare Lal, Bar-at-law, Babu Raghubir Saran, Mr. W.K. Bonnaud, and Lala Ganeshi Lal. Mr E. White, the Director of Public Instruction presented a detailed scheme of the proposed college. The instant munificence of Rai Bahadur Lala Krishna Sahai in donating a handsome amount of Rs. 5000/- for raising the College was highly applauded.

This foundation money and a government grant of Rs. 6000 was pooled together to open a window on college education in the town. The conclave concluded on a hopeful note to meet again on 8 March to give a practical shape to the idea. It resolved to found an Arts College at Meerut and formed a Divisional Committee to accomplish this project. Mr E. White's paper on the setting up of the college was approved. He proposed that initially, "the College was to emerge from the Government Anglo-Vernacular High School, more

commonly known as the Zila school, which had been serving the primary needs of the district since 1866." The High School was to be bifurcated from 1st July into two. The running of the middle classes (V to VIII) became the responsibility of the Municipal Board and it was retitled Zila School. The IX and X classes of the Anglo-Vernacular High School were transferred to form the nucleus of the College.

### The Early Years

After the fortuitous short span of gestation period of 145 days, the little acorn turned into a tender seedling on 15 July 1892. Its birth must have been celebrated with all gaiety, condour and festivity required of such an historic occasion. It was christened "Meerut Divisional College" and had its temporary abode at the Government Anglo-Vernacular High School, Kaisar Gunj. The first faculty consisted of Mr W.K. Bonnaud, Principal, Babu Shital Prasad Ghosh, Professor of English, Babu Basant Lal, Professor of Mathematics, Babu Jeoti Prasad Bajal, Professor of Science, Moulvi Yaqub Ali, Professor of Persian and Pandit Mukh Ram, Professor of Sanskrit. The maiden alumni of 70 entered the portals of the College on 15 July 1892. The 78 days honeymooning at the Kaisar Gunj ended on 30 September when the College moved to its permanent premises Rampur House or Old Bank (now Old House). The estate belonged to the Begum of Rampur in Rohilkhand. It was given on a rent of Rs. 100 per month to the College. Mr William Jesse, Principal of the College (1904-1923) called it "The Tumbledown House", for no astrologer could tell when it would squat down on the ground. But it gallantly stood the ravages of wind and weather up till the disastrous earthquake of 1905 which deprive it of its upper rooms. No soul can tell the blessed hour its foundations were laid. In its prosperous days it accommodated a bank, and before that a canal office probably; and in 'pre-historic' times it was a General's abode. Today it houses the faculty of education. Its Corinthian columns, high ceiling halls, perfectly laid corridors, black and white mosaic floors, teakwood doors, venetian blinds and skylights still allure the old timers. And like old beauties of the bygone days, it is rightfully proud of its grandiose past.

The "Tumbledown" was surrounded by cultivated land, peasants' huts and guava groves. It had clusters of

\*Librarian, Central Library, University of Roorkee, Roorkee-247667

wild plants all along the boundary road which extended upto the District Courts. The main entrance opened on the northern side facing the cantonment. In between the main gate and the bungalow, a cricket field and kucha tennis courts were provided for

In the beginning the College had only two classes – Entrance and Intermediate with a strength of 48 and 22 students respectively. It was affiliated to Allahabad University. Only five subjects were taught, viz. English, Mathematics, Science, Persian and Sanskrit. Great emphasis was given on sports. The College participated in university tournaments at Allahabad, and Inter-School sports at Aligarh. The rear rooms of the House served as hostel. These rooms are now in a state of decay and some of them have been pulled down to make room for Teachers' Home. The College Library had a modest collection of 800 books. During those days Freshers' Day was celebrated with revelries and marrying. It was called Nauroz. Perhaps the dirty business of ragging was not practised by the students of those good old days.

According to the norms of the government, an amount of Rs. 50,000 was required as endowment fund to grant permanent sanction to the College. The founders had an up-hill road before them. Luckily, the founders' nervousness was short-lived as the large-hearted donors exceeded the required sum by ten thousand. In March 1893 Sir Charles Crosthwaite, the Lieutenant Governor visited the town on the occasion of the Nauchandi fair Durbar. He also paid a visit to the nascent College and "cordially approved of it as well adapted for the requirement of the new College"

The College had hardly settled in its new home that the founders fondled with the idea of expanding its academic activities. Teaching of law was mooted in 1893. Mr Piyare Lal, Bar-at-law opened the law classes on 5 January of that year. He began teaching his fifty odd students without any remuneration. During those days intermediate was required qualification for LL.B and it was one year course. Two other lower category legal professional classes – Vakilship and Pledership were also introduced. Entrance qualification was more than enough for these professional courses. One year later Babu Gurcharan Das joined the Department to provide relief to Mr. Piyare Lal who plodded single-handed for one and a half years in the Department. LL.B. teaching set the ball rolling for new teaching departments. B.A. classes were next on the agenda. B.A. (3rd year class) teaching began on 1 July 1894. Affiliation for B.A. involved considerable expenses and an amount of Rs. 90,000 was required as per university affiliation condition. The local populace had always been very enthusiastic for the intellectual upliftment of

the new generation. In a meeting convened in the Nauchandi fair on the 7 April 1894, fourteen thousand rupees were donated on the spot and the coveted target of Rs. 90,000 was fully subscribed by December end of that year.

Principal Bonnaud was recalled by the Government on 15 July 1895. The Annual Report of that year records that "during the first three years of its (College's) existence, he laboured undefatigably in organising the work of the institution, and the Committee have placed on record their appreciation of his zeal and energy." During his period College enrolment reached to 194 and of staff to thirteen. To accommodate the students one more bungalow was hired to serve as hostel.

### Period of Consolidation & Growth

The sudden departure of Principal Bonnaud made the Executive Committee think of finding a principal with European qualifications as it was one of the conditions of Allahabad University for affiliation for B.A. classes. The choice fell on Mr. C.A. Andrews, M.A. from Cambridge University, who was then a professor in Agra College. Mr Andrews assumed the charge of the College on 16 July 1895. He devoted his energies in consolidating gains made by his predecessor. A highly qualitative improvement was made in the academic work in the College. Intermediate examination results went up from 19 percent to 69 percent in the following years. Out of the first batch of twelve students sent up for B.A. examination, eight qualified for the degree. This meant 66 pass percentage and gave the College a foremost position in the degree results in common with the two other colleges in the province – Agra and Bareilly. High academic honours were achieved by its distinctive students. Mr Ganga Sahai topped in LL.B. in 1895 and won the most coveted Lumsden Gold Medal, Mr Anandi Prasad stood first in the intermediate examination in 1897 and Indu Bhushan secured a first division and third rank in B.A. examination of 1898. The years 1896-1902 witnessed a good many changes introduced by the university in replanning academic programmes in the College. In 1896 the Senate closed the doors of LL.B. examination on undergraduates. It led to a drastic fall in LL.B. enrolment. It was followed by momentous changes in B.A. curriculum. This necessitated reshuffling of teaching staff and involved the question of more funds. Another drastic change in the academic programme led to the bifurcation of the degree of Bachelorship into two distinct groups – B.A. and B.Sc. For imparting education in Science, the College was required to seek affiliation of B.Sc., which was subjected to stiff requirement involving laboratories and staff. The College could not successfully meet the require-



ment of the above changes. As a consequence the year 1900 witnessed a sudden ebb in the enrolment which was reduced to 136 in 1903. When the College was struggling to recoup its lost strength, Principal Andrews passed away in December 1902. His death was followed by a series of misfortunes that struck the College in quick succession. Seven of the old guardians and founders of the College joined the *Swarg Lok* within two years. The Earthquake of 1905 snatched the first floor of the Collage building. A plague in the town made the students living in outlying hostel to shift to College classrooms and the classes meet in tents. Such was the state of College affairs when Mr William Jesse assumed its principalship on 27 Dec. 1903. Misfortunes awaited him in torrents. The Upper India Bank ran insolvent depriving the College of its funds. The Great War kept away two of its professors for military service, as a consequence of which commerce classes had to be closed down. The Non-Cooperation Movement shook the College to its foundation like a tornado, as a large number of students responded to Gandhiji's non-cooperation call. Principal Jesse handled the situation coolly but with firm determination. "Endowed with inexhaustive stores of optimism this young man always upheld a forward policy which he would not relinquish even in the darkest hour of despair." He sought cooperation of the local gentry and the College Executive to overcome the difficult situation. He also placed the college problem before the Lieut. Governors of the Province – Sir James La Touche and Sir John Prescott Hewett. And their help and cooperation came in abundance. Providence smiled on him and the crises melted into the air. And thus redawned the era of constructive development and growth.

In response to his appeal for funds, an amount of Rs 30,000 was raised to complete the hostel building attached to the old college. The Rampur Estate measuring 102 acres was acquired under the Land Acquisition Act. A very fortuitous development took place in 1906 and it proved a blessing in disguise for Mr Jesse. The acquisition of Rampur Estate had further depleted the meagre funds of the College. "It was therefore, devised to amalgamate the College with the proposed Nanak Chand School. Lala Nanak Chand a great philanthropist of Meerut, had bequeathed a huge sum of money for benevolent purposes with no restriction of caste or creed." An alliance with this rich School, it was thought, would relieve the College of its financial burden. The School and the College building plans were worked out by Mr Gunnell Wood and construction work began in college compound in 1907, but College building plan was deferred as a hostel was an immediate requirement of the College. The management of the College and Nanak Chand Trust jointly invited Sri John

Prescott Hewett, the Lieut. Governor to lay foundation of the School and the hostel. The ceremony was performed on 11 March 1907. A policy decision at the Government level turned the tables in favour of the College. The Government did not allow the union of Schools and Colleges. It founded a Government Model High School in the town and high school classes from the College were transferred to the newly founded Government Model High School in 1910. Consequently, Nanak Chand Trust had to dispose of the new building which was purchased by the College. The new building formed the nucleus of the College. The library functioned in the hall (now called Mangal Pandey Hall) and the classes were held in the rooms flanking the Hall. As more space was required, a wooden mezzanine floor was laid across the hall and the library functioned from there while the ground hall was used for cultural activities.

On the academic side Principal Jesse's contribution was of equally high order. The great visionary introduced Business Diploma classes in 1905. Perhaps it was the first course of its kind in the country. In 1914 the College opened Commercial Diploma classes which continued upto 1914. These employment oriented courses were predecessor of M.B.A. courses of today. Alas, the College discontinued them. Had these courses been continued, the College would have become a Harvard Business School in India. Science teaching was strengthened by reorganising laboratories. The College got affiliation for B.Sc. in 1906. Intermediate biology section was introduced in 1913. Another important feature of Jesse's time was the ebb and flow in the enrolment of students. From 136 students in 1903 it rose to 300 in 1908. The enrolment graph dipped to 165 in the same year when school classes were separated from the College. Again it rose to 443 in 1915 to fall to 313 during Khilafat disturbances in 1920. The launching of the residential universities of Allahabad, Benaras and Aligarh sounded the death knell of the affiliating colleges. There was enmasse migration from colleges to universities and as a result of it the enrolment graph again dipped to 218. "The numerical strength of the College had reached its lowest ebb, and was destined to rise again under the efficient supervision and expert guidance." Principal Jesse went on leave to British East Africa in 1922 and he found pastures anew there. For about two years 1922-24 the College remained without a principal. Messrs S O Purvis and V S. Tamma, Vice-Principals conducted the affairs of the College to the best of their abilities. They were just holding the fort for the commander to take over.

### Two Commanders

God's mill grinds slowly but it grinds exceedingly well. The two years waiting period ended on a hopeful

note. The College not only found one but two commanders to steer its ship. The secretaryship was offered to the Hon'ble Rai Bahadur Lala Sita Ram, an illustrious 'O.B.' and an enthusiastic trustee of the college. The principalship devolved on Lt. Col. T.F. O'Donnell, M.C., B.A. who was already widely known in the educational circles in these provinces. An efficient administrator, who even presides over the legislature of the Provinces, at the helm of the College Executive, and a first rate disciplinarian with honours from the fields of Mars and Minerva, at the prow of the College, was no doubt the happiest coincidence in the history of this institution." The great Irish brought laurels to the College both in academics as well as in extra-mural activities. Within a few months of his taking over, the college spruced up to a new life. It became a lively centre of academic growth. In the true spirit of the Irish public school traditions, O'Donnell promoted the spirit of comradeship and pride in Meirans. And they responded profusely to his ideas.

On the academic side, postgraduate classes were introduced in English and History in 1924, and Persian, Sanskrit and Philosophy in 1927. Performance in examination results touched the highest point-cent-per-cent. In some subjects, the College bagged not only first divisions but topped the list. In B.Sc. Mr. Dharm Chand Bajaj topped the Allahabad University among college candidates and Mr. Akhtar Hussain topped in B.A. result in 1927. One of the College UTC Sargeant Mr. Ganpat Ram Nagar was selected for Sandhurst in 1926. A rare honour indeed. During O'Donnell's days first divisions rained like cats and dogs on the college campus.

Its fame as a centre of excellence in collegiate education spread in the whole of the north India. Students from far and near envied to be a student of this College. Its enrolment escalated from 218 to 800. A campaign was launched to add more classrooms and hostels. A deputation of the College Executive waited on Sir William Marris, the Governor on the 4 March 1925 at the Circuit House. The Government sanctioned a grant of Rs. 39,000 for the new buildings. The Meerut Division public contributed funds generously and an amount of Rs. 85,574 was promised out of which Rs. 65,059 flowed to the college treasury within a few weeks. It was all because of hearty support of Mr. H.G. Walton, the Commissioner of the Division. Mr. P.W. Marsh and Mr. E.H.H. Edye, Collectors of Meerut secured another contribution of Rs. 50,000 from the district. Public generosity exceeded the target of fund collection. The northern wing of the academic complex was added in 1928 and the New Blocks Hostel was completed in 1927.

O'Donnell was a great visionary. He had a missionary zeal to transform his "Boys" into "men of wisdom,

indefatigable courage, and to infuse in them the *esprit de corps*." It was through the fine blending of academics and sports and games that he was highly successful in his mission. He not only added new subjects at the postgraduate level but introduced a new system of learning through tutorial classes and tutorial groups. Under the first system bigger classes were bifurcated into smaller ones so that individual attention was made practicable. It led to general improvement in the performance of students. The tutorial-system offered three-fold advantages to students – a group of 20-25 students formed a tutorial group and it was placed under the charge of a teacher who supervised their progress and removed their difficulties in consultation with their subject teachers, the teacher in-charge also acted as their local guardian thus bestowing on them paternal care and he also kept hawk's eyes on their off campus activities; the teacher in-charge also motivated them for extra-mural activities. This new system helped the students to learn and grow in public school environment without inheriting the ills of public school education – such as snobbery, alienation from grassroots of the society and living under elite class milieu. The students developed an ideal symbiosis between real life situation in village India and modern education devoid of unnecessary trappings of public school education. O'Donnell provided first grade education at the very moderate cost. This provided an opportunity to the sons of rural lower middle class families in this area to join this great centre of collegiate education. This situation was reflected in the composition of students' population of the College of those days; over 75 percent of them belonged to the rural areas.

The College administration, since its inception fully subscribed to the dictum that "all work and no play makes Jack a dull boy." The College left no stone unturned in exposing its alumni to the real world of total education. Corporate life, social and literary associations, sports and games, public speaking and debates, dramatics, free lance writing, self-government, social service, military corps, and group parades were some of the many extra-mural activities the College promoted among its students. Perhaps it was the only College in the country where the principal and teachers rubbed shoulders with their boys on the playgrounds. As an honour and incentive prizes and medals were awarded for the best performance and "a much coveted Gold Medal was started by the Principal (O'Donnell) himself for the All-Round-Best Student – all these important factors have contributed greatly to the efficiency and popularity of the Meerut College which now stands second to none in the Province."

The cavalcade of event of this illustrious College would be incomplete without the mentioning of the munificence of the gentry of the town who shed their

sweat and blood to grow the "little acorn into a mighty tree". The stalwarts among them were Rai Bahadur Lala Krishna Sahai who was first to open his purse strings and donated rupees 5,000 for establishing the College in 1892, Khan Bahadur Sheikh Hafiz Abdul Karim, a founder member who presented the college with a donation of Rs. 10,000. Babu Prahalad Singh, first secretary of the College, Hon'ble Rai Bahadur Lala Nihal Chand, Rai Bahadur Lala Ramanuj Dayal, Secretary of the college who gave 1/4 of the proceeds of his village Nagla Mukhtaiser to the college fund. Babu Rahubir Saran a *raja* of the town and Secretary of the College since 1892, and the most distinguished of them all was the Hon'ble Rai Bahadur Lala Sita Ram. He belonged to the famous Patharwala family of the town. He was an old alumni of the college of 1904 batch. He stood first in the university in B.A. examination. He practised as a *vakil* in the High Court of judicature at Allahabad and was elected to the Legislative Council in 1920 and became its President in 1925. He served the College as Secretary for the ever longest period of nineteen years. He and Principal O'Donnell formed a highly compatible union and the College made incredibly rapid progress during their tenure.

The chronicles of the College would lack luster without portraying the darling of the students, the most illustrious principal-administrator who mingled freely with the local gentry without any snobbery or colour distinction, the Great Irish Lieut. Col. T.F. O'Donnell, M.C., B.A. (Royal University, Dublin). Before joining the College in 1924, he had served as a Professor of English at Agra College (1910-1915), served in the Great World War (1915-1919) and commanded a battalion. Because of his daring deeds and qualities of leadership, he was awarded Military Cross and was mentioned in despatches. After the cessation of the hostilities, he returned to his "Old love" – education and served as Acting Principal, Agra College, 1919-1921. Before joining the College, he also worked as Registrar, University of Lucknow 1921-1924. O'Donnell's actions, decisions and committed style of functioning won him the confidence of all who came in contact with him. During his days he was a subject of lively discussion in the drawing-rooms of the *rajas* of the town, in the staff room of the academic community, and in the mess and halls of residence of students. His name still echoes in the corridors of the College. He was loved and respected as well as feared. His words still ring in the ears of those who have heard him. "The college is a non-political, non-sectarian institution and its one aim is to turn out true citizens and true patriots." In the best traditions of British public schools, Principal O'Donnell planted and nurtured students' academic associations, old boys associations, military training, and sports on the college campus. These bodies, he firmly believed would expose

the students to a wider world of knowledge and would endow them with the qualities of leadership, selfless service, discipline and above all, a sense of belonging to their Alma Mater. His vision was to turn out of the portals of the College students as complete men to face the challenges of the world without any demur. The College motto of those days – ANIMO ET FIDE (courage and faith) was thoroughly reflected in his deeds.

Principal O'Donnell handed over the reins of the College in July to his most senior colleague Dr. B.R. Chatterjee. The great August Movement engulfed the College. Students participated in large numbers in the Quit India Movement "but the crisis was tide over through the gentle forbearance of Dr. Chatterjee on the one hand and the uncommon tactfulness of Sir Sita Ram on the other."

### Decade of Expansion

Prof. Chatterjee's ten-year long innings would be remembered as the decade of expansion. Postgraduate classes were opened in Chemistry (1945), in Botany (1947) and in Physics (1949). L.T. classes were started in 1949. The College had thus been imparting education at the U.G. and P.G. levels in the faculties of Arts, Science, Commerce and Law. The strength of the College jumped from 1173 in 1942 to 4,000 in 1952. The college played host to various university and national level sport meets during his period. Since its affiliation to the Agra University in 1927, the college had carved an important status among the colleges of the university. It had effective representation on the Board of Studies, Executive and the Syndicate of the university. It was a show-piece of the university and it had the proud privilege of playing host to university sports and games. It had the singular distinction of holding its own convocation since 1947. The convocation addresses were delivered by such distinguished educationists and public men as Dr. T.F. O'Donnell, Dr. Shyama Prasad Mukerji, Shri Sri Prakash and Dr. Sita Ram. These convocations, have been worthy of the Meerut College tradition, and have already created in the College what may be called a university atmosphere.

A cursory look at the postgraduate colleges in Uttar Pradesh in 1950's would reveal that Meerut College occupied a prime place among them all. It had all the paraphernalia of a university – 102 acre campus dotted by over one hundred well-furnished classrooms, well-equipped laboratories, Undergraduate and Postgraduate teaching in 22 subjects in five faculties, a student population of over 4000 and a 140 strong faculty, a library of 32000 volumes of advanced level books and journals with a seating capacity for 400 readers, 5 halls of residence for 700 students and sports complex spread



over 15 acres and to maintain the above facilities it had a recurring budget of Rs 7,50,000 00 per annum during those good old days. It was a university by all standards. Dr Radhakrishnan, Chairman of the University Education Commission, who visited the College in 1949, remarked, "It may well be converted into a unitary university." In Principal Madan Mohan (1952-58), the College had the good fortune of being headed by the right person at the right moment. "Thoroughly imbued with the O'Donnellian traditions of discipline and efficiency, armed with wide experience in varied fields of education and possessed of tireless energy and zeal, Shri Madan Mohan is eminently fitted for the great task of transforming this college into a University." To achieve the coveted objective, he from the rampart of the College hall gave a call to transform the college into a People's University. By people's university, he meant that university education should be within the reach of ruralites, sons of the farmers who composed 75 percent of the college's undergraduate population of those days. The College had rendered a yeoman's service by encouraging villagers to send their sons and daughters for collegiate education to it. The ruralites stood them in best stead and brought laurels to the College both in academics and sports and games. The College created inexpensive facilities such as nominal hostel rent, community kitchen, library service, simple living conditions on the campus so that a village boy with limited means could enjoy fruits of the best education at the lowest cost. Its result was that every village took pride in having graduates of the College who brought enlightenment and prosperity to the village. It may be heartening to note that two State Governors, one former and the other serving, Shri Virendra Verma (Ex-Governor, Himachal Pradesh) and Kr Mahmood Ali (Governor, Madhya Pradesh) belonged to rural section of the College alumni.

### **A String of Luminaries**

Professor Madan Mohan refurbished the O'Donnellian image of the College. Classroom teaching was strengthened, tutorial system was reintroduced and more emphasis was laid on extra-mural activities. He conducted the affairs of the college in the most befitting manner. His term came to an abrupt end as he had to join as the first Vice-Chancellor of Gorakhpur University in 1959. He was succeeded by Dr S S Joshi (1958-1961), a great scientist who also served as scientific advisor to industries in the area. Dr K K Sharma (1961-1965) succeeded Dr Joshi. He was an authority on monetary economics. He also served as advisor member to the Reserve Bank of India. In Dr V Puri (1965-1968), the College had a scientist Principal of international repute. He was a leading plant scientist of

his days. During his tenure the College made distinctive contribution in the founding of Meerut University. He was awarded emeritus professorship in the University for his innovative researches in plant morphology. He was succeeded by Dr B Bhattacharjee (1968-1970). He was a philosopher Principal in the true sense of the word. He conducted the affairs of the College with great devotion. Dr. Parmatma Sharan followed Professor Madan Mohan's footsteps in managing the affairs of the College. During his period (1971-1976) two national level conferences were held in the College – Indian Economics Conference (1972) and Indian Political Science Conference (1976). Dr Ram Kumar, a Mathematician of repute served the college well during the short span of three years (1976-78). Professor R C. Mittal (1978-83) devoted his energies and resources to recreate Prof. Madan Mohan's dream of a college of distinctive type where teaching and extra-mural activities should be conducted in rhythmic order. The present Principal Dr V.B. Chauhan joined the College in 1983. He would be remembered for restoring the vanishing glory of the olden days. The year long Centenary Celebrations of the College bear a stamp of his administrative acumen.

Meerut College Constitution still carries the old legacy of having the Commissioner of Meerut Division its President and the District Collector, its Vice-President. Mr A H Harrington, C.S. Commissioner and Mr E White, Collector, Meerut were the first to occupy these high offices. These offices were purely honorific. The defacto management of the college had been in the hands of the Hon'ry Secretary and the Principal. Since its inception in 1892, the College Secretaryship had been in the hands of selfless and enlightened personalities, men of redoubtable courage, farsighted imagination and leaders in every walk of life. Each and every one of them was an institution in his own right. Their munificence knew no bounds and they were always wedded to the cause of the College. Their purse strings always remained open to meet any financial eventuality in the College. Babu Prahlad Singh was the first Honorary Secretary (1902-1904). He was followed by Babu Raghubir Saran (1904-1906), Rai Bahadur Lal Ramanuj Dayal (1906-1911), Hon'ble Rai Bahadur Lal Sukhbir Singh (1912-1922), Dr Sir Sita Ram (1922-1934, 1941-1946), Dr Bhupal Singh (1934-1938), Lala Madhusudan Dayal (1938-1941), Seth Rameshwar Prasad (1941-1952, 1961-1963), Seth Prithvi Nath (1952-1955), Lala Hari Har Prasad (1953-1958), Sri Raghubar Dayal Mittal (1958-1961, 1978-1981), Dr. Raja Ram Mittal (1963-1966), Sri Sultan Singh Jain (1966-1969), Dr P.K. Caroli (1969-1972), Sri Am Chand Jain (1972-1978) and Sri Arvind Kumar Seth (1981-). All of them dis-

inctly contributed their might in steering the ship of the College on the high seas of knowledge. At times they faced wild storms and tornados but as an enterprising navigator, they steered clear their ship and always endeavoured to maintain it in a ship-shape condition. It would be most appropriate to place on record the selfless service to the College rendered by the Houses of the Seths, the Prasads, the Mittals and the Jains. They wedded themselves to the college and jealously guarded its interests.

#### University Status – A Cherished Dream

Perhaps Meerut College has the rare distinction of remaining an affiliating college to three universities – Allahabad (1892-1927), Agra (1927-1966) and Meerut (1966-). When shall the Great God smile to break the shackles of affiliation and grant it freedom to be master of its own destiny? A university status to the College would make its great founders wake up from their century old slumber and bless their fondling child. Today the College provides education in 5 faculties comprising

25 postgraduate subjects. The College is spread over 102 acres in three locations. It has over 6,000 students on its rolls and a 250 strong faculty. To date it has produced over one lac graduates. Whereas Allahabad, Delhi and Rajasthan universities outshine other universities in the matter of sending the largest number of their students in civil services, the Meerut College is proud of sending the largest number of its graduates in military, police and judiciary. Perhaps it has also produced the largest number of lawyers and trained teachers. To cater to the needs of the students it has 6 hostels including one for girls. It maintains four tennis courts, three hockey fields, two football fields, one cricket pitch with pavilion, one gymnasium, one sport track, four volleyball courts, two basketball courts, eight badminton courts, one table tennis hall and one covered and one open air swimming pool. The College has armoured, artillery and infantry units of NCC. It also draws students from Africa, South East and Middle East countries. Is'nt it a university in its own right?

## THE TECHNOLOGICAL INSTITUTE OF TEXTILE & SCIENCES, BHIWANI (HARYANA)

### ADMISSION NOTIFICATION – 1993

The Institute prepares students for B Tech degree courses of Maharshi Dayanand University, Rohtak in the following disciplines -

Course	Intake	Last date for receiving completed applications
(a) B Tech (Computer Science)	20	June 5, 1993
(b) B Tech (Textile Technology)	60	
(c) B Tech (Textile Chemistry)	10	

#### MINIMUM QUALIFICATIONS

10 + 2 of Haryana Board (or equivalent) with atleast 60% marks in the aggregate of PCM

OR

B Sc with atleast 60% marks in the aggregate of PCM and having passed in English (optional or qualifying)

#### Note:

(1) There are NO restrictions with regard to Age or Domicile

(2) The Institute's prospectus alongwith the University's prospectus for B Tech Entrance Examination can be had from the Director, Technological Institute of Textile & Sciences, Bhiwani 125 021 (Haryana) by sending Rs 165/- by Money Order or on cash payment of Rs 150/- at the Counter. The prospectus can also be purchased at Rohtak from some approved Book-sellers for Rs 150/-

#### CRITERIA FOR SELECTION

Through an Entrance Examination to be conducted by M D University at Rohtak on 3rd July, 1993. Candidates appearing in 10 + 2 (or equivalent) examination can also appear in the Entrance Test

**DIRECTOR**

# Research at Manipur University (1980 – 1991)

## Scholars and Supervisors

Ramansu Lahiri\*

Krishnan Subramaniam\*\*

### Registration of Ph.D Scholars : A Boom

More than 700 scholars had registered for Ph D programme under various disciplines under the three schools of studies in the University during the period 1980-1991 (12 years). Figure 1 records the rise and fall of the interests of the scholars during this period. Some of the interesting situations that can be observed in this figure are :

- rise of interest during 1980-81 took a downward turn during 1981- 83,
- again a substantial upward mobility during 1983-86 which turned into a massive decline during 1986-88,
- once again a steady rise of interest during 1988-91

Around 42% of the scholars registered their names in the School of Science, while 31% and 27% registered in Social Sciences and Humanities, respectively. The rising academic interest in Science subjects as compared to Social Science and Humanities has become a global phenomenon. The trend of the registration in this University is just a replica of this universal feature. The distribution of the scholars among various departments of the three schools are shown in Table 1

The major section of registered science scholars, as listed in Table 1 is in the Department of Life Sciences (i.e Botany and Zoology streams). Similarly in the Schools of Social Science and Humanities, the Departments of History and Manipuri attracted a major number of scholars. The reasons for scholars opting these subjects could be attributed to

- a sound faculty strength and infrastructural facilities available in the departments,
- availability of research fellowships,
- availability of opportunities to work in the research projects undertaken by the faculty members of the departments with the financial assistance from the funding agencies,
- resourcefulness, eminence and star image of the supervisors

It has, however, been noted that the number of registered scholars in the last six years (1986-91) is nearly double compared to the first six years (1980-85)

### Number of Registered Scholars

Year	Science	Social Science	Humanities
1980-85	105	70	67
1986-91	191	148	118

This confirms a very balanced growth of all the three schools on equal footing in terms of the registration

### The Ph.Ds

It was in 1984, the University for the first time, awarded three scholars the degree of 'Doctor of Philosophy' (two from the Department of Life Sciences and one from the Department of History). Till December 1991, 158 scholars have been awarded Ph.D degrees. As is evident from Table 2 and 3, the School of Science produced the maximum number of Ph.Ds [74 (46.6%)], followed by the School of Social Sciences and Humanities [42 (26.7%) each]

### Mobility

The year-wise mobility of the Ph.D scholars as input and output is shown in Figure 1. It was assumed that a scholar required a minimum 3-4 years time from the date of registration to complete his/her Ph.D programme. In real situation, as the figure highlights, the position is different. Of the 413 scholars registered till 1987, only 158 could complete their programme and were awarded the degrees. However, the output seems to be inconsistent from 1984 onwards and no proportionate compared with the input. The University may have to address itself to this problem and review its research atmosphere

The Schools of Science and Social Science, since 1987, registered a significant increase in the number of Ph.Ds awarded, whereas the School of Humanities maintained a uniform record since 1985, producing almost equal number of Ph.Ds every year (Table 3)

### Schools of Studies

Table 1, 3, 4 and 5 display the number of registered scholars, Ph.Ds awarded, and the distribution of faculty members, year and department-wise

\* Assistant Professor, Library & Information Science,

\*\* Assistant Registrar & Spl PA to the VC,  
Manipur University, Canchipur, Imphal.



The School of Humanities comprises five departments. Till 1991, this School awarded Ph.D degrees to 42 researchers.

The School of Social Science consists of six departments. Till 1991, 42 scholars were awarded Ph.D degree under this school. The first social science researcher who was awarded Ph.D degree (male) belonged to the Department of History (1984), and the first woman researcher who was awarded Ph.D degree was from the Department of Political Science (1985).

The School of Science consists of nine departments, of which five were established during 1958-89 (Table 4). One scholar of Medical Science from the Regional Medical College was awarded Ph.D degree under this school. Till 1991, 74 scholars were awarded degrees.

Table 3 indicates that 50% of the total Ph.Ds awarded are from the Department of Life Sciences. This Department produced the first Science Ph.Ds in both the sexes (1984). The Department of Life Sciences is the biggest Department having 21 faculty members and well developed infrastructural and other facilities. This Department has also been recognized by the University Grants Commission as a Center of Excellence and has been awarded Special Assistance by the Commission.

The following Table gives the picture of input (1987) and output (1991) in respect of the three Schools of Studies.

Department	Input till 1987	Output till 1991	Percentage
<b>School of Science</b>			
Life Sciences	91	37	40.7
Mathematics	27	14	51.9
Chemistry	17	09	53.0
Physics	13	05	38.5
Earth Science	21	04	19.0
Medical Science	01	01	100.0
Anthropology	13	04	30.7
Total	183	74	40.4
<b>School of Humanities</b>			
Manipuri	44	12	27.3
Hindi	34	15	44.1
English	28	8	28.6
Linguistics	3	5	Incomplete
Philosophy	1	2	data
Total	118	42	35.6
<b>School of Social Sciences</b>			
History	50	19	38.0
Economics	31	11	35.5
Political Science	20	08	40.0
Commerce	08	02	25.0
Library Science	06	02	33.3
Education	06		
Total	121	42	34.8

With the introduction of Postgraduate courses in the Northeastern Regional Medical College, Imphal, the University established the School of Medical Sciences in 1989. However, this School was not taken into account for the purposes of this study, as the researchers are yet to register under this School. A few faculty members of this College had registered for Ph.D programme in the University under the School of Science and one was awarded Ph.D Degrees.

### Male Domination

The dominance of male group has been prominent in every discipline. 72% of the scholars registered during 1980-1991 (Table 2) and 76.5% of the Ph.Ds awarded during 1984-1991 are men. The School of Science has 82.4% of men scholars, Social Science 69% and Humanities 73.8%. Even among the faculty 87% are male and 65 out of 66 supervisors are male.

### Communities

Majority of the researchers who were awarded Ph.D degrees, obviously belong to local communities. The Meitei, the largest community of the State, is quite naturally on the top with 71.5% (113 out of 158) of the total Ph.Ds awarded, followed by Muslims (28.5%) (10), Tribal (9) and scholars hailing from other states (26).

It is seen from Table 6 that

- Seven out of nine of the tribal scholars belong to School of Social Science and the remaining two to the School of Science.
- None belonging to Tribal and Muslim community figure in the School of Humanities.
- Nearly 90% of the scholars in the Department of Hindi are from outside Manipur (12 out of 15).
- Ph.D degree in Commerce is yet to be awarded to any one belonging to Meitei community.

### The Supervisors

Tables 4 and 5 indicate the number and positions of faculty members in various departments at the time of commencement and in 1991. During the 12 year period, the rise of faculty positions from 55 to 163 is significant. In 1991 there were 37 Professors, 57 Associate Professors and 69 Assistant Professors in position in the University.

The 158 scholars were guided by 66 faculty members. Out of the 66 supervisors, 55 are University teachers as the total also include guides from outside the faculty members of the University, viz

1. A Vice-Chancellor (Manipur University)
2. An emeritus scientist of Botanical Survey of India

3 A Director of College Development Council

4 Three faculty members of colleges.

The following interesting features could be observed about the supervisors (Table 7)

- 50% of the supervisors are from the State of Manipur (33 out of 66) and 50% are from the rest of India
- While the supervisors from Manipur have guided 53.2% of the total Ph.Ds awarded (84 out of 158), the supervisors hailing from outside Manipur have catered to the remaining 46.8%
- One supervisor belongs to local Muslim community
- One scholar completed his Programme independently

Only one guide is a woman

Two supervisors (one from Anthropology and one from Philosophy) jointly guided a Ph D scholar in the Department of Manipuri and two others (one each from Physics and Earth Sciences) in another case jointly guided the programme in the Department of Earth Sciences

- Three of the supervisors belong to Tribal community

#### Project Supports

During the period 1980-1991, 62 faculty members, were awarded projects (Table 8) by different funding agencies. These research activities of the faculty members had ensured development of research facilities and supported a number of scholars

#### Individual Contribution

The Table 9 highlights the number of Ph Ds awarded on particular core area, worked under individual supervisor

The number of Ph D researches guided by the supervisor individually, as the Table shows, is significant

- in Entomology (6 & 4), Fisheries (5), Plant Physiology (5) and Ecology (4) of Life Sciences,
- in Relativity (4), Organic Chemistry (4), Integral transform (3); Inorganic chemistry (3) and Solid States (3) of Pure Science,
- in Modern Indian History (8), Regional History (7), Demography, (Economics) (4), Ancient Indian History (3), and Economic Development (3) of Social Sciences; and
- in Criticism and Folklore (8), Early and Medieval Hindi Literature (5), Hindi Folklore (4), Lexicology (4), Anglo American Literature (3), and Philosophy (3) of Humanities

The Table reveals that in the core areas of Modern Indian History of Social Sciences and Criticism and Folklore of Humanities, the supervisors individually have guided 8 researchers each which seems to be the largest in number, during the period

#### Supervisors : Researchers (Ratio)

Table 10 highlights the ratio of supervisor and researches at different departments. The Department of History has the highest ratio - 1 : 4.7, followed by Manipuri - 1 : 4, and the Department of Chemistry and Hindi - 1 : 3 each. The supervisor-researchers ratio amongst the School and at the University level is almost equal (School of Humanities - 1 : 2.8, the School of Social Science - 1 : 2.6, the School of Science - 1 : 2.2, and the University level - 1 : 2.4)

#### Conclusion

The study makes it clear that the rate of Ph D output (a minuscule percentage) was much behind the input of registered scholars during the period 1980-1991. However, the cases of those scholars who may have already completed their work and await result have not been taken into account

The present work also does not investigate as to why and when the interest of the scholars had lost track and/or the reasons for their dropping out in the middle. It is likely that the drop-outs are due to profitable engagement elsewhere. A full and detailed study is required to go into this question, if only to ensure that the drop outs are not due to want of adequate infrastructural and other facilities. It is also possible that some of the researchers might have submitted their thesis and await results. This study has, however, painfully noted the fact that a very insignificant number of scholars have been awarded JRF and University Scholarships for the Ph D programmes. No one has been awarded SRF till now. The study also could not include the aspects availability of scholarships, teacher fellowships, etc., for want of adequate data.

The University has proven and worthy faculty members, capable of undertaking serious research can be seen from the fact that a large number of faculty members were awarded research grants by different national funding agencies

#### References

- 1 Lahiri R. Research At Manipur University (1980-91). Highlights on Ph.D Research. University News, Nov 9 1992, 6-10
- 2 Manipur University, Annual Reports, 1980-1991

Table 1 : Number of Ph. D. Registrations (1980-91)

DEPARTMENTS		1980			1981			1982			1983			1984			1985			1986			1987			1988			1989			1990			1991			TOTAL				
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T					
1 School of humanities		1	1	1	1	1	3	3	3	3	1	1	1	1	6	5	11	9	1	10	1	1	0	3	3	2	2	4	4	3	7	31	11	42								
English		0			0	2	1	3	1	1	6	1	7	4	1	5	2	2	4	10	4	14	1	1	2	2	6	1	7	5	3	8	37	16	53							
Linguistics		0			0		0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	1	2	3	2	1	3	4	1	5	2	2	11	5	16						
Manipuri		2	2	4	5	1	6	1	1	2	0	8	2	10	9	3	12	3	2	5	3	2	5	3	1	4	1	1	2	4	11	15	40	27	67							
Philosophy		0			0		0	0	0	0	0	0	0	0	0	0	0	1	1			0		0																		
Total school of humanities		3	2	5	6	1	7	6	2	8	1	15	3	18	19	9	28	15	5	20	16	7	23	5	4	9	6	4	10	17	5	22	17	17	34	126	59	185				
2. School of Science																																										
Anthropology		0			0		0	0	0	0	0	0	0	0	1	2	3	6	3	9	1	1	1	0	2	2	1	1	4	3	7	15	8	23								
Biochemistry		0			0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Chemistry		0	2	1	3	0	0	0	0	0	0	2	2	4	1	5	2	2	4	3	1	3	1	1	4	4	4	0	3	2	5	21	6	27								
Computer Sc		0			0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Earth Science		0			0		0	0	0	0	0	4	4	2	2	4	5	10	3	3	2	3	2	2	6	1	7	3	1	4	4	4	29	9	38							
Life Sciences		1	1	9	5	14	3	2	5	6	1	7	13	3	16	9	8	17	14	5	22	4	5	9	3	2	5	11	6	17	8	8	16	11	3	14	92	51	143			
Mathematics		1	1	1	1	1	3	3	2	1	3	5	5	2	2	4	3	1	4	5	1	6	2	2	1	1	4	1	5	2	1	3	31	7	38							
Medical Science		0			0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1									
Physics		0	1		1	1	1	1	1	1	0	4	4	1	1	2	2	2	2	2	2	2	4	3	1	4	3	2	5	1	1	0	17	6	23							
Statistics		0			0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1								
TOTAL SCHOOL OF SCIENCE		2	0	2	13	6	19	6	3	9	8	2	10	26	3	31	19	15	34	32	19	51	18	8	26	12	3	15	27	9	36	17	10	27	25	9	34	207	87	294		
3 School of Social Sciences																																										
Commerce		0			0		0	0	0	0	0	1	1	1	1	1	3	3	1	2	3	1	2	3	0	0	2	2	4	1	5	4	3	7	14	8	22					
Economics		1	1	6	1	7	1	1	2	1	5	2	7	3	3	1	2	3	1	2	3	7	7	1	1	2	6	6	9	2	11	10	10	51	9	60						
Education		0			0		0	0	0	0	0	0	0	0	0	0	2	2	4	2	2	2	2	0	1	1	2	2	1	3	2	1	3	7	7	14						
History		0	3		3	5	5	5	5	0	6	5	11	11	2	13	7	5	12	4	2	6	3	3	8	1	9	6	2	8	8	2	10	61	19	80						
Library Science		0			0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Political Science		1	1		0	1	2	3	2	2	5	5	4	4	3	3	2	2	5	3	2	2	5	5	4	4	3	3	3	1	4	32	4	36								
Total School of Soc Scs		1	1	2	9	1	10	7	3	10	3	0	3	17	7	24	19	2	21	16	9	25	17	9	26	9	1	10	19	4	23	24	6	30	27	7	34	168	50	218		
School of Humanities																																										
Humanities		3	2	5	6	1	7	6	2	8	1	0	1	15	3	18	19	9	28	15	5	20	16	7	23	5	4	9	6	4	10	17	5	22	17	17	34	126	59	185		
Sciences		2	0	2	13	6	19	6	3	9	8	2	10	28	3	31	19	15	34	32	19	51	18	8	26	12	3	15	27	9	36	17	10	27	25	9	34	126	87	294		
Social Sciences		1	1	2	9	1	10	7	3	10	3	0	3	17	7	24	19	2	21	16	9	25	17	9	26	9	1	10	19	4	23	24	6	30	27	7	34	168	50	218		
Grand Total		6	3	9	28	8	36	19	8	27	12	2	14	60	13	73	57	26	83	63	33	96	51	24	75	26	8	34	52	17	69	58	21	79	69	33	102	501	196	697		

Source: MLC Ph D Registrations

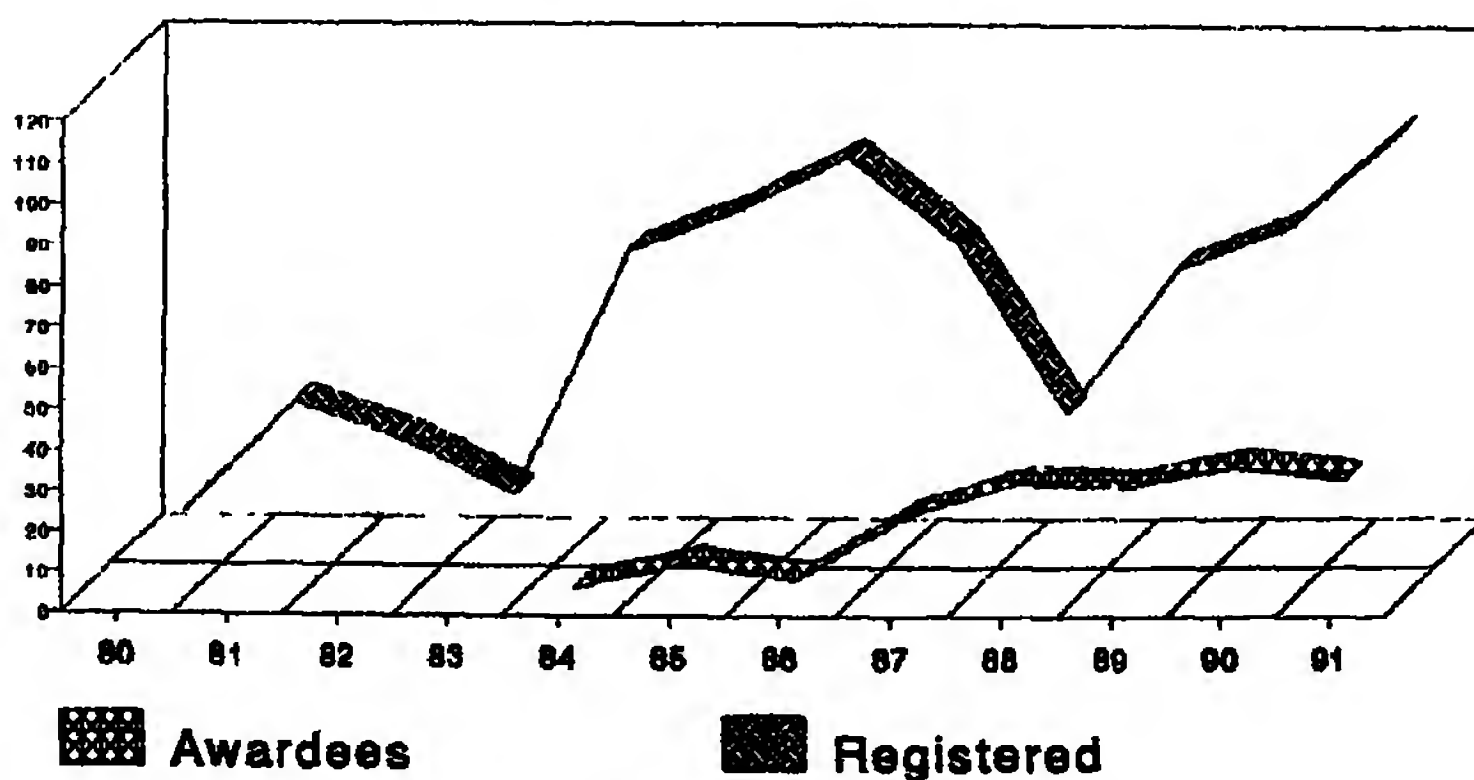
Male 71, Female 28 (out of total number)



**Table 2 : Breakup of Ph. D Awardees  
School & Sex Wise (1980-1991) [N = 158]**

<i>School</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Science	61 (82.41%) (50.4%)	13 (17.59%) (35.1%)	74 (100%) (46.8%)
Social Science	29 (69%) (24%)	13 (31%) (35.1%)	42 (100%) (26.7%)
Humanities	31 (73.8%) (25.9%)	13 (31%) (29.8%)	42 (100%) (26.7%)
Total	121 (76.5%) (100%)	37 (23.5%) (100%)	158 (100%) (100%)

**REGISTERED SCHOLARS (1980-91) AND Ph D AWARDEES (1984-91) OF MANIPUR UNIVERSITY**



*Figure 1*

Table 3 . Department, Sex and Year-wise Break up of Ph. d Awardees

DEPARTMENT/ Subject		1984			1985			1986			1987			1988			1989			1990			1991			TOTAL			Percentage		
		M	FM	T	M	FM	T	M	FM	T	M	FM	T	M	FM	T	M	FM	T	M	FM	T	M	FM	T	M	FM	T			
1. School of Humanities																															
English		0	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	2	1	3	6	2	8	14.29	4.76	19.05					
Hindi		0	1	1	2	2	4	4	2	2	4	3	3	1	3	3	1	2	2	12	3	15	28.57	7.14	35.71						
Linguistics		0	2	2	1	1	1	1	1	0	1	1	0	1	1	1	0	4	0	4	1	5	9.52	2.38	11.90						
Manipuri		0	0	2	1	1	1	0	1	2	3	3	3	2	1	3	0	7	0	7	5	12	16.67	11.90	28.57						
Philosophy		0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	1	2	1	2	0	2	4.76	0.00	4.76						
Total School of Humanities		0	0	0	4	2	6	4	0	4	6	0	6	4	3	7	4	3	7	4	6	31	11	42	73.81	26.19	100.00				
2. School of Science																															
Anthropology		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2	4	0	4	5.41	0.00	5.41						
Chemistry		0	0	0	0	0	2	2	2	2	0	2	0	1	1	3	1	4	8	1	9	10.81	1.35	12.16							
Earth Science		0	0	0	0	0	0	0	0	0	0	2	2	1	1	2	0	3	0	3	1	4	4.05	1.35	5.41						
Life Sciences		1	1	2	1	1	3	1	4	7	1	8	5	3	8	6	3	9	3	1	4	27	10	37	36.49	13.51	50.00				
Mathematics		0	0	0	0	0	4	4	4	0	2	2	3	1	4	4	4	13	1	14	17.57	1.35	18.92								
Med Science		0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	1	0	1	0	1	1.35	0.00	1.35						
Physics		0	0	0	0	0	1	1	1	1	2	2	2	0	1	0	1	5	0	5	0	5	6.76	0.00	6.76						
Statistics																															
Total School of Science		1	1	2	1	0	1	1	0	1	11	1	12	10	1	11	12	3	15	12	5	17	13	2	15	61	74	82.43	17.57	100.00	
3 School of Soc Sciences																															
Commerce		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	2	0	0	2	0	2	4.76	0.00	4.76				
Economics		0	1	1	0	1	2	2	3	3	1	1	2	2	4	0	9	2	11	21.43	4.76	26.19									
Education		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00					
History		1	1	0	0	0	1	1	3	4	7	1	2	3	2	1	4	11	8	19	26.19	19.05	45.24								
Lab Science		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0	2	4.76	0.00	4.76								
Pol Science		0	1	1	1	1	1	1	1	0	1	1	1	1	1	2	4	5	3	8	11.90	7.14	19.05								
Total School of Soc Sc		1	0	1	1	1	2	0	0	4	4	0	4	6	4	10	4	2	6	7	3	10	6	3	9	29	13	42	69.05	30.95	100.00
School of Humanities																															
Humanities		0	0	0	4	2	6	4	0	4	6	0	6	4	3	7	4	3	7	4	2	6	5	1	6	31	11	42	19.62	6.96	26.58
Science		1	1	2	1	0	1	1	0	1	11	1	12	10	1	11	12	3	15	12	5	17	13	2	15	61	13	74	38.61	8.23	46.84
Social Science		1	0	1	1	1	2	0	0	4	4	0	4	6	4	10	4	2	6	7	3	10	6	3	9	29	13	42	18.35	8.23	26.58
Grand Total		2	1	3	6	3	9	5	0	5	21	1	22	20	8	28	23	10	33	24	6	30	121	37	158	76.58	23.42	100.00			

Source: MU Annual Reports

**Table 4 : Departments Faculty Members (1980-1991)**

Departments	Year of Commencement	Faculty members at commencement			Faculty members in 1991			of commencement			Percentage in 1991		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>School of Humanities</b>													
English	1980	7		7	8	1	9	24.14	0.00	24.14	20.00	2.50	22.50
Hindi	1980	4		4	7	1	8	13.79	0.00	13.79	17.50	2.50	20.00
Linguistics	1986	4	1	5	5	2	7	13.79	3.45	17.24	12.50	5.00	17.50
Manipuri	1980	6	1	7	10	2	12	20.69	3.45	24.14	25.00	5.00	30.00
Philosophy	1987	6		6	4		4	20.69	0.00	20.69	10.00	0.00	10.00
<b>Total Humanities</b>		27	2	29	34	6	40	93.10	6.90	100.00	85.00	15.00	100.00
<b>School of Science</b>													
Anthropology	1985	5		5	5		5	9.62	0.00	9.62	5.88	0.00	5.88
Biochemistry	1989	2		2	2	1	3	3.85	0.00	3.85	2.35	1.18	3.53
Chemistry	1980	4		4	11	1	12	7.69	0.00	7.69	12.94	1.18	14.12
Computer Science	1988	3		3	4	2	6	5.77	0.00	5.77	4.71	2.35	7.06
Earth Science	1985	8		8	12		12	15.38	0.00	15.38	14.12	0.00	14.12
Life Science	1980	14		14	20	1	21	26.92	0.00	26.92	23.53	1.18	24.71
Mathematics	1980	7		7	11		11	13.46	0.00	13.46	12.94	0.00	12.94
Physics	1980	5		5	10	1	11	9.62	0.00	9.62	11.76	1.18	12.94
Statistics	1988	4		4	4		4	7.69	0.00	7.69	4.71	0.00	4.71
<b>Total Sciences</b>		52	0	52	79	6	85	100.00	0.00	100.00	92.94	7.06	100.00
<b>School of Social Science</b>													
Commerce	1985	5		5	6		6	12.82	0.00	12.82	1.76	0.00	11.76
Economics	1980	6		6	10	2	12	15.38	0.00	15.38	19.61	3.92	23.53
Education	1987	4	1	5	3	1	4	10.26	2.56	12.82	5.88	1.96	7.84
History	1980	8	1	9	10	2	12	20.51	2.56	23.08	19.61	3.92	23.53
Library Science	1986	4	3	7	4	4	8	10.26	7.69	17.95	7.84	7.84	15.69
Political Science	1980	6	1	7	7	2	9	15.38	2.56	17.95	13.73	3.92	17.65
<b>Total Soc Science</b>		33	6	39	40	11	51	84.62	15.38	100.00	78.43	21.57	100.00
<b>Grand Total</b>													
Humanities		27	2	29	37	6	43	22.50	1.67	24.17	20.67	3.35	24.02
Science		52		52	79	6	85	43.33	0.00	43.33	44.13	3.35	47.49
Social Science		33	6	39	40	11	51	27.50	5.00	32.50	22.35	6.15	28.49
<b>Total</b>		112	8	120	156	23	179	93.33	6.67	100.00	87.15	12.85	100.00

Note - Faculty Positions include Part timers, Research Associates, Adhocs, Visiting Professors, etc.

10. Library Science Department in 1986 was manned by Part timers.



**Table 5 : Faculty Position (1980-1991)**

Department	Professors		Associate Professors		Assistant Professors		Total	
	1980	1991	1980	1991	1980	1991	1980	1991
<b>School of Science</b>								
Anthropology		1		2		2	0	5
Biochemistry				1		2	0	3
Chemistry		3	1	4	2	5	3	12
Computer Sc				2		4	0	6
Earth Sciences		1		1		6	0	8
Life Sciences		5	2	9	8	7	10	21
Mathematics		3	2	3	5	5	5	11
Physices		3		4	3	4	5	11
Statistics		1				2	0	3
<b>Total School of Science</b>	<b>0</b>	<b>17</b>	<b>5</b>	<b>26</b>	<b>18</b>	<b>37</b>	<b>23</b>	<b>80</b>
<b>School of Soc Science</b>								
Commerce		1		1		4	0	6
Economics		3	2	3	4	4	6	10
Education		1		1		2	0	4
History		2	2	6	6	3	8	11
Library Sc						3	0	3
Political Science		1	1	3	3	5	4	9
<b>Total Soc Science</b>	<b>0</b>	<b>8</b>	<b>5</b>	<b>14</b>	<b>13</b>	<b>21</b>	<b>18</b>	<b>43</b>
<b>School of Humanities</b>								
English	1	4	3	4	3	1	7	9
Hindi		3		3	1	2	1	8
Linguistics		2		2		3	0	7
Manipuri		2	1	7	4	3	5	12
Philosophy		1		1		2	0	4
<b>Total Humanities</b>	<b>1</b>	<b>12</b>	<b>4</b>	<b>17</b>	<b>8</b>	<b>11</b>	<b>13</b>	<b>40</b>
<b>Grand Total</b>								
Humanities	1	12	4	17	8	11	13	40
Science		17	5	26	18	37	23	80
Social Sc	0	8	5	14	13	21	18	43
<b>Total</b>	<b>1</b>	<b>37</b>	<b>14</b>	<b>57</b>	<b>39</b>	<b>69</b>	<b>54</b>	<b>163</b>

Source MU Annual Reports

**Table 6 : Breakup of Ph. D awardees in various communities and sex (1984 - 1991)**

Departments	Mestel		Tribal		Muslim		Others		Total			% (of male/female awardees	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total	Male	Female
<b>School of Humanities</b>													
English	6	2							6	2	8	19.35	18.18
Hindi	2	1					10	2	12	3	15	38.71	27.27
Linguistics	4	1							4	1	5	12.90	9.09
Manipuri	7	5							7	5	12	22.58	45.45
Philosophy	2								2		2	6.45	0.00
<b>Total Humanities</b>	<b>21</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>31</b>	<b>11</b>	<b>42</b>		
<b>School of Science</b>													
Anthropology	2		1		1				4	0	4	6.56	0.00
Chemistry	6				1		1	1	8	1	9	13.11	7.69
Earth Sciences	6	1							7	1	8	13.11	7.69
Life Sciences	10	10	1		2		1		13	10	23	44.23	76.92
Mathematics	11	1					2		13	1	14	21.31	7.69
Medical Sciences							1		1	0	1	1.64	0.00
Physics	5				1				6	0	6	8.20	0.00
<b>Total Science</b>	<b>41</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>10</b>	<b>1</b>	<b>61</b>	<b>13</b>	<b>74</b>		<b>41.94</b>

Table 6 (Contd.)

School of Social Sciences													
Commerce					1		1		2	0	2	6.90	0.00
Economics	5	2	1		2		1		9	2	11	31.03	15.38
History	5	7	4	1	2				11	8	19	37.93	61.54
Library Science	1						1		2	0	2	6.90	0.00
Political Science	4	3	1						5	3	8	17.24	23.08
Total Social Sc.	15	12	6	1	5	0	3	0	29	13	42		
Grand Total													
Humanities	21	9	0	0	0	0	10	2	31	11	42	25.62	29.73
Sciences	44	12	2	0	5	0	10	1	61	13	74	50.41	35.14
Social Sciences	15	12	6	1	5	0	3	0	29	13	42	23.97	35.14
Total	80	33	8	1	10	0	23	3	121	37	158		

Note 1 Out of 121 male awardees Meitei Male 80 (66.1%)

2 Out of 37 female awardees Meitei Female 33 (89.2%)

3 Out of 158 Awardees Meitei 113 (71.5%)

Table 7 : Breakup of Ph. D Supervisors (From within and outside Manipur and sex : 1980 - 1991)

Department	Supervisors hailing from Manipur				Supervisors hailing from outside Manipur				Total No of Supervisors + Ph.D		
	Male		Female	No of Ph. Ds	Male		Female	No of Ph. Ds	Male	Female	Total (Ph.D)
School of Humanities											
English	1			3	4 [c]			5	5	0	8
Hindi	1			2	4			13	5	0	15
Linguistics	1			4	1 [i]			1	2	0	5
Manipur	3 [a]			12 [a]					3	0	12
Philosophy	1 [d]			2 [a]					1	0	2
Total Humanities	7		0	23	9		0	19	16	0	42
School of Science											
Anthropology	2			3 [a]	1			1	3	0	4
Chemistry	2			7	1			2	3	0	9
Earth Sciences					3 [i]			4 [b]	3	0	4
Life Sciences	8			20	7			17	15	0	37
Mathematics	1			4	5			10	6	0	14
Medical Sciences					1 [f]			1	1	0	1
Physics	2			2 [b]	1			3	3	0	5
Total Science	15		0	36	19		0	38	34	0	74
School of Soc. Sc.											
Commerce					1			2	1	0	2
Economics	5 [g]			11					5	0	11
History	2 [e]			8	2			11	4	0	19
Library Sc					1 [f]			2	1	0	2
Political Sc	3 [d]		1	6	1 [f]			2	4	1	8
Total Social Sc	10		1	25	5		0	17	15	1	42
Grand Total											
Humanities	7			23	9			19	16	0	42
Science	15			36	19			38	34	0	74
Social Science	10		1	25	5		0	1	15	1	42
Total	32		1	84	33		0	74	65	1	158

[a] & [b] Two supervisors belong to Anthropology & Philosophy jointly guided one under Department of Manipur & two belong to Physics and Earth Sc. jointly guided one under Department of Earth Sciences respectively [c] one Vice-Chancellor [d] Two in Pol Sc and one in Philosophy are College teachers [e] Two belong to tribal Community [f] One visiting professor and [g] One from Muslim community and one self guidance

Table 8 : Projects Awarded to the Faculty Members (1980-1991)

Departments	No of Projects	No of Faculty Members	Funding Agencies
Life Sciences	68	24	UGC, BSI, SCST, CSIR, ICAR, DOE, DST, DBT, NEC, STATE COUNCIL OF S/I, ICMR
Chemistry	7	3	UGC, CSIR, DST, DSTF
Physics	4	3	UGC, DST, DSTF
Mathematics	4	3	UGC, DST
Earth Sciences	14	7	UGC, DST, ISRO, ICSSR, DSTF, NCERT, RDO
Statistics	2	2	DSTF
Anthropology	1	1	UGC, DST, ICHR
History	4	4	LGC, ISI, Planning Department
Economics	9	5	UGC
Commerce	1	1	UGC
English	2	2	UGC
Manipur	1	1	National Archives
Linguistics	4	3	UGC ML
Total	121	64	

**Table 9 : The Core area and the No. of Awardees (1980-1991)**

School of Science			School of Social Science			School of Humanities		
Life Sciences			History			Manipuri		
Fishery	5(HU) + 1(PL) + 1(WV)	7	Modern Indian History	8(SNP) + (LD)	9	Criticism & Folklore	8(IRB)	8
Plant Physiology	5(LJ) + 1(PR)	6	Regional History	7(Gk)	7	Comparative Literature	1(BD)	1
Ecology	4(PSY) + 2(SS) + 1(DD)	7	Ancient Indian History	3(GPS)	3	Old Manipuri Literature	2(CM)	2
Genetics	2(IG) + 1(SK) + 1(HB)	4						
Entomology	4(TK) + 6(BP)	10	Political Science			English		
Plant Pathology	2(NI)	2	Political thought	2(MH)	2	20th Century English Fiction	3(SNP)	2
Parasitology	1(CD)	1	Indian Political Thought	2(I PS)	2	20th Century Anglo American Literature	3(NK) + 1(SKT) + 1(KJM)	5
Physiology	1(H)	1	Indian Political System	1(KB)	1	Commonwealth Literature	1(SCS)	1
			Judicial System	2(NI)	2			
Physics			Political Partition	2(NI)	2			
Solid State	1(HNK) + 3(RG)	4				Hindi		
Theoretical Physics	1(CA)	1	Economics			Linguistics	2(ST)	2
			Industrial economics	2(HN)	2	Early & Medieval Literature	5(KNP)	5
Chemistry			Economic development	3(MI)	3	Folklore	4(JM)	4
Organic	4(ISK)	4	Demography	4(II)	4	Fiction	2(JP)	2
Inorganic	2(SM) + 3(AV)	5	Agricultural Economics	1(MDI)	1	New Poetry	2(D)	2
			Political Economics	1(NM)	1			
Mathematics						Linguistics		
Relativity	1(KSB) + 4(RKT)	5	Commerce			Lexicology	3(MSN)	4
Integral Transform	3(AKC)	3	Behavioural Science	2(VPG)	2	Linguistic theory	1(DNS)	1
Biomechanics	2(RSG)	2	Library Science			Philosophy		
Plasma	2(GCD) + 1(DPS)	3	Management & Planning	2(MRK)	2	Isms	3(MK)	3
Demography	1(DPS)	1						
Earth Sciences						The acronyms of the supervisor's name is recorded within parentheses		
Geography	2(RPS)	2						
Geophysics	1(DKG)	1						
Meteorology	1(SAH + CA)	1						
Anthropology								
Social Anthropology	1(BM) + 2(CB)	3						
Physical Anthropology	1(KS)	1						

**Table 10 : Supervisor – Awardee Ratio (1980-1991)**

Departments	No of Teachers	No of Ph D Awardees	Total Ph D Awardees	Total Teacher guides
Life Sciences	1	25	37	15
Physics	1	17	5	3
Chemistry	1	3	9	3
Mathematics	1	3	14	3
Earth Science	1	3	4	3
Anthropology	1	3	4	3
Medical Science	1	1	1	1
Total School of Science	1	22	74	15
History	1	47	19	34
Political Science	1	16	8	4
Economics	1	2	11	5
Commerce	1	2	2	1
Library Science	1	2	2	1
Total School of Social Science	1	6	32	16
Manipuri	1	4	12	3
English	1	16	18	3
Hindi	1	3	5	3
Linguistics	1	5	15	3
Philosophy	1	3	5	3
Total School of Humanities	1	28	45	16
Total University	1	24	158	66



# From Learning to Economic Activity

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Shri R. Venkataraman, former President of India, delivered the Convocation Address at the annual convocation of the Amravati University. He observed that "Education by itself neither causes unemployment nor increases the overall level of employment. Mere changes in educational policy cannot do much to rectify the mismatch between the job opportunities and the educated job seekers. The remedy for unemployment lies in the overall growth of the economy, which in turn is dependent on the entrepreneurial ability of the educated youth to engage himself in productive activities. The structure and the contents of the course should be framed in such a way that attitude of the young people and their enterprise, could be appropriately developed so that they can move smoothly from the academic life to the active life of socio-economic developments. In short, education should facilitate a simple transition from learning to economic activity". Excerpts

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A mere degree is not the end of Education because passing an Examination cannot end the trials and tribulations of life. Rather, your life starts only now. The great Historian Arnold Toynbee once declared,

*"It is both absurd and unjust to classify a person, once for all, as the first class or third class when he is only 20 years old. There are slow-growers who blossom late in life and conversely there are brilliant starters who fail to fulfil the early promise."*

Toynbee goes on to give the example of Winston Churchill who was apparently backward as a child but became a brilliant Statesman later in life. In our own country, we have the example of Mahatma Gandhi whose academic records in the Schools and Colleges did not give any indication of the global greatness that awaited him later.

Similarly, Babasaheb Dr B. R. Ambedkar suggested several social injustices and no one knew while he was a student he will one day shape the Indian constitution itself as one of its prime architects.

Examples of the converse phenomena of a brilliant student at Schools and Colleges followed by mediocre anonymity are more difficult to cite for the obvious reason that History loses track of such persons. My purpose today in emphasising the error in regarding academic achievements as a test of personality is to put the importance of degrees and convocation in their true perspective. All those graduating today have been through rigorous test, but important as the test has been, it is a part of the appraisals and re-appraisal that await them in life. Such tests will have to be faced with the same, if not, greater seriousness. Let every youth graduating today seek to find his or her right aptitude, his or her skills whatever it be and then concentrate on perfecting it. In fact, every youth graduating today should try to discover himself or herself and thereafter discover his or her use to Human society.

There is an interesting observation about the National Park in Africa. It goes like this 

*"When the Sun rises every morning in Africa, a lion wakes up. It must run faster than the fastest Gazelle for if it does not, it will have to pine in hunger. When the Sun rises over Africa, a Gazelle also wakes up. It must run faster than the fastest lion, because, if it does not, the lion will be upon it. And so, whether lion or gazelle, when the Sun rises, run you must."*

The sun has risen for all the graduates receiving their parchments here today and run they must, be they lion or gazelle. In this competitive world, one has to be smart, able and agile to carve a place for oneself.

Friends, an occasion like convocation affords an opportunity to review the Education system of University in India. I would like to share a few reflections of mine with you. Attention has been traditionally bestowed on two major questions: one relates to the issue of quality Vs quantity or problem of numbers. The second to the problem of unemployment amongst educated.

Let us examine the first question. With each decade, the reservoir of student strength is growing larger and larger in volume. Higher enrolment in elementary schools and secondary schools has inevitably led to larger enrolment in higher education. The adverse teacher-student ratio and the steady erosion of personal touch between the teacher and the student has led to lower standard amongst students and higher number of failures.

We have now more than 5000 colleges in the country. The facilities in most of these have been officially described as being "Far below the level of qualitative viability". The Government of India's policy document entitled "Challenge of Education" itself says "the general condition of University and colleges is a matter of great concern to the Nation".

There are several factors contributing to the erosion of quality in Education. The Vice-Chancellor and Principals are under heavy pressure from regional and parochial interest. The faculty members feel that merit no longer counts and extraneous considerations play a significant part in the selection and promotion of incumbents. On the other hand, several reports say that the faculty members themselves do not set shining examples when they resort to agitation in the university campus in the presence of students shouting slogans. Thus, the universities and colleges lack serenity and atmosphere of an academic haven, which has been academic's ideal. The shortage in funds and escalation of costs of buildings, books and equipments add to the misery. Technological education needs kits, apparatus and instruments, which are becoming increasingly costlier. Students' agitation disrupts classes and lectures and studies have shown that some universities are not working even half the number of stipulated working days. These also contribute to the all round lowering of the standards.

In my opinion, the talk of quality and quantity as alternative betrays ignorance. Increase in quantity need not necessarily be at the expense of quality nor does stagnation or decrease in quantity result in improvement of quality. Therefore, constant effort should be made to improve the quality and the quantity side by side.

This brings me to the second question, namely the problem of unemployment of the university educated youth. Universities in India were set up by British as recruiting agencies for black coated clerks to run the vast administration which they were building up. As the graduates in the earlier period found a scriptory job immediately after the graduation, our people

have come to believe that a university degree is a passport to employment. Later, when the graduates churned out by the university outstripped employment opportunities, a mood of frustration and bitterness came over the youth of this country. In their own countries, British and European scholars went to universities to enrich their knowledge, widen their vision and garner wisdom. They did not go to the university for getting government employment. Those scholars studied subjects of their choice and did not have to take a rigid combination of subjects as our students are obliged to. Even today, in American university, a student may take any combination of subjects and has only to secure a stated number of credits for a degree. For instance, a student may take Engineering, Economics, Ecology or Sanskrit, Western Music and Biology or other combination of subjects, which he thinks will help him in his later life. In our country, a student has to take a set combination of subjects such as Mathematics, Physics, Chemistry or Zoology, Botany, etc. While an American student chooses subjects which will be of use to him to find a vocation for himself, an Indian student is left with a knowledge of subjects which may or may not help him in later life. I understand some universities are trying the experiment of allowing greater freedom in the choice of subjects for qualifying for higher degree. There is much to be said for this system.

Obviously, it is impossible for the government to guarantee employment to every graduate in the country. Hence, the curricula of university education should, I feel, be so framed as to enable the graduate to engage himself in gainful occupation by developing qualities of initiative, enterprise and adaptability. The alternate suggestion to cut down the number of

graduates by restricting admission or the opening of new educational institutions is a "counsel of despair", fraught with serious consequences to the nation and to the future generations. Education by itself neither causes unemployment nor increases the overall level of employment. Mere changes in educational policy cannot do much to rectify the mismatch between the job opportunities and the educated job seekers. The remedy for unemployment lies in the overall growth of the economy, which in turn is dependent on the entrepreneurial ability of the educated youth to engage himself in productive activities. The structure and the contents of the course should be framed in such a way that attitude of the young people and their enterprise, could be appropriately developed so that they can move smoothly from the academic life to the active life of socio-economic developments. In short, education should facilitate a simple transition from learning to economic activity.

There has been a plethora of advice on reform of Education from Dr Radhakrishnan Commission, Sri A. L. Mudaliar Commission, the Kothari Commission, Dr Chattopadhyaya Commission and recently the Acharya Commission apart from several state commissions and committees. In fact, the late D. S. Kothari lamented once "Implementation is the heel of achilles in Indian education".

During the last 45 years of our independence, we have achieved spectacular progress in several areas. We have transformed the backward India that it was before independence into a modern industrialised nation in the world. Thanks to the vision and foresight of Jawaharlal Nehru, heavy industries

like Steel, Coal, Aluminium, Copper, Chemicals and Pharmaceuticals, Fertilisers etc. were started on a massive scale through successive five year plans. Thus, our industrial economy has strikingly diversified with our manufacturing capabilities extended over wide range of products. In the volume of industrial production, we are within the first 15 countries of the world.

Unfortunately, regional chauvinism and fissiparous tendencies are rearing their ugly heads straining the unity and integrity of India. The people have not realised the immense benefits that accrue to them on account of sharing of the entire wealth of the nation amongst themselves. For instance, India is equal in size to the whole of Europe excluding Russia. This part of Europe which consists of several countries, is artificially striving to achieve economic viability through the concept of European economic community and the single market. Our resources are of course as unevenly distributed as in Europe. Our deposits of coal, iron and ore, manganese, copper and bauxite are concentrated in Bihar, West Bengal, Madhya Pradesh and Orissa. Gypsum, Lead, and Zinc occur mainly in Rajasthan. But our steel plants, cement factories and other industrial establishments using these resources are dotted throughout the country. This has been rendered possible because of the free movement of goods and commodities from Kashmir to Kanyakumari.

In one sense, we are the largest economic community in the world and we are able to share and utilise the wealth of one part of the country in every other part. We have pluses and minuses, but these balance out at the national level. Mutuality compensates disparity.

Immediately after the independence, states representatives used to urge on the centre to correct

regional imbalance and promote a balanced regional development. The objective of planning in India is not only to utilise the resources to the maximum advantage, but also bring about balanced regional development so that the weaker states do not continue to languish and become weaker. It should be said to the credit of planning process that a lot has been achieved in this direction, though, in view of the size, the population and utter backwardness of certain regions, a lot more remains to be done. States which are backward therefore, have much to gain from remaining part of the nation rather than parting away from it. It would be difficult for those without broad vision to understand the value and importance of equitable sharing of national wealth through integrated and well knit national endeavour. But, you graduates who have had the benefit of higher education should be able to not only see the benefits but become active agents for the promotion of national unity and integrity. You should do so in your own interest as well as in the interest of the region and the nation.

One of the principal objectives of the university is to make better citizens out of common people. Virtues like tolerance, discipline and law abidance cannot be developed overnight but must be cultivated from the very early age in the schools and colleges. Indeed, history of civilization is nothing more than the history of human endeavour to tame the primeval instincts of man and make him live in peace and harmony with his fellow men.

From time immemorial, India has practised tolerance of other faiths and beliefs and had afforded asylum for oppressed religious sects. The Jews sought refuge in India when their temple was desecrated by the Ramon Emperor. The Parsees have settled in India

and have become part and parcel of India. Christianity came to India in the First Century A.D. and has flourished without any let or hindrance. Islam lived in harmony in India till British resorted to the policy of Divide and Rule. Presiding over the Congress in 1940 Maulana Abul Kalam Azad said

*"It was India's historic destiny that many human races, cultures and religions should flow to her, and many a caravan should find rest here"*

It is a pity that such a country should now be riven with differences based on caste, creed and religion. The university has elevated you from the sordid qualities of sectarianism and bigotry; it should spur you to a more positive activity of promoting tolerance and communal harmony.

Democracy succeeds only when there is a voluntary observance of the laws of the land. It is only because 90% of the people are law abiding, a handful of enforcement officers are able to maintain law and order. A growing tendency to defy the laws, rules and regulations disturbs peace and harmony which is indispensable for economic development and growth. The ultimate sufferers in violent disorders are the people themselves. One should realise that we are governed by our elected representatives and not by any alien authority without the consent of the people and that the three arms of the State, namely the Legislature, the Executive and the Judiciary are manned by our own representatives. The Constitution and the laws of the land lay down procedures for redressal of grievances and they should be fully utilised when necessary or occasion arises.

Resort to violence and terrorism for any purpose including desirable objective is the negation of civilised and orderly society. It is totally un-

ethical to harm persons indiscriminately, more particularly women and children in no way concerned with the issues. Terrorism is becoming a global phenomenon and calls for concerted international action. It behoves the educated and cultured section of society to stamp terrorism from the face of the land.

If university teaches one *patriotism* to sacrifice everything for the freedom and honour of Motherland, *humanism* to regard every person irrespective of religion, caste or creed as a Brother, *discipline* to perform one's duty to one's own satisfaction, it would have rendered yeomen service to its alumni and to the nation.

Graduates of the year! You are the architects, planners and builders of the next century, you have been initiated to enter profession of your choice and you will have to be responsive to all the scientific, social, economic and other changes that are ahead of you. You cannot rest on your oars. In his parting message, Lord Buddha said

*"Be a lamp unto yourself and work out your salvation with diligence"*

The lamp that has been lit for you at this university will light your way and you will have to work with diligence. The great Tamil Poet Thiruvalluvar said 2000 years ago,

*"Knowledge is an armour against destruction, it is a fortress which cannot be destroyed even by enemies."*

colleges have presented research papers in conferences, and are guiding research in their own respective fields.

The University has 14 Postgraduate departments which include the Departments of Computer Science and Technology also. This shows that the University is trying to keep pace with the changing times. These Postgraduate departments conduct various programmes which help the students in their research and supplement their courses. These include educational tours, group discussions, seminars, panel discussions, field work, etc. In the beginning, these departments were housed in the buildings of affiliated colleges.

One enters into a library to grow in wisdom. The Amravathi University has an up-to-date library which includes books, gazetteers, encyclopaedias and periodicals. The total number of books is about 30 thousand, of reference books – 8 hundred, and of periodicals – 227. The UGC network information is also added to the library. The library provides the reading room facility and will soon have a spacious building of its own.

As the University has UGC recognition, it has been possible to undertake various development projects. The University Guest House, and the Auditorium are complete. The buildings for Computer Science Department, Applied Electronics Department, Vidyarthi Bhavan, Annexe of the Administrative building, Girls' Hostel, Academic Section are in progress. The roads are also being built.

The University aims at an all round development of its students and undertakes various schemes for this purpose. It arranges debating and elocution competitions, various cultural programmes and Sports Competitions. The NSS Unit of the University has brought laurels to

## A Decade of Development

Report by the Vice-Chancellor

Dr. G.V. Patil

This University was established on 1st May 1983 and it is about to complete a decade.

When the University was established, the number of the colleges affiliated to it was 67. There were 27,000 students, 49 examinations and 11303 examinees. This year the number of colleges has gone up to 130. There are 1,21,500 students of which 15,693 have received their degrees today. The Faculty wise breakup of the graduands this year is

The Faculties of Arts and Social Sciences	5,295
The Faculty of Science	1,686
The Faculty of Home Science	174
The Faculty of Commerce	3,169
The Faculty of Education & Physical Education	3,622

The Faculty of Law	83
The Faculty of Medicine and Surgery	138
The Faculty of Ayurvedic Medicine	172
The Faculty of Engineering and Technology	1,354

22 research candidates have also received Ph.D. degrees. Their Faculty-wise number is

The Faculty of Arts	8
The Faculty of Science	8
The Faculty of Commerce	3
The Faculty of Home Science	2
The Faculty of Education	2

In all, 54 persons have received Ph.D. degree of the University so far. Many of the teachers from the University departments and affiliated



the University. Its aim is to create social awareness and love of Social Service among students. Ten thousand of its volunteers from various affiliated colleges regularly participate in various schemes of afforestation, environment and water conservation, literacy and social enlightenment drives and personality development programmes. In response to the needs of the time, the University is undertaking various programmes to create harmony and fellow-feeling among various sections of the Society. From 25th July to 3rd August, 1992, the University organized National Integration Camp. About 200 boys and girls from 16 different Universities participated in this camp and demonstrated their artistic abilities. On 15th February, 1993, the University arranged at Akola a 'Sadbhavana Matry Yatra' which included participants from various religious communities.

The water problem in India has become acute as a result of the deterioration of our environment. The University N S S volunteers have so far built more than 125 bunds of various types of which 8 are on the University Campus. The N S S volunteers also work to promote cleanliness, to dispel superstitions, to develop leadership qualities and to promote work culture. This year the N S S Unit achieved spectacular success at Bhavanagar in the Yuvak Mahotasav. The five of its members participated in the Republic Day parade.

The University's achievements in the field of Physical Education are also spectacular. The University arranges a number of Inter University Sports Competitions. During 1992-93, All India Inter-University Women's Football Competition was held at the College of Physical Education, Amravati. The boys Kabaddi team of the University achieved noteworthy success in the Western Zone Inter-University Kabaddi meet hosted by Sardar Patel University of Gujarat. Four of our participants bagged prizes in the All India Inter-

University Judo Competition. We also claimed the third place in the All India Inter-University, 'Shareer Sauskthav' Competition held at Haridwar.

The University has an Employment and Information Bureau working under the guidance of the State

Government. It informs the students from all the four districts covered by the University about various competitive examinations, scholarships and courses available. It also registers graduate and postgraduate students of the University for employment purposes.



## TATA INSTITUTE OF SOCIAL SCIENCES

(A Deemed University)

Post Box No. 8313, Deonar, Bombay 400 088

Invites applications for the following posts. Qualification/experience requirements are as prescribed by the University Grants Commission

Sr No	Name of the post	Pay scale and emoluments	Required specialisation at the Master's level for respective posts
1	<b>PROFESSOR</b> (One post) in the Unit for Research in the Sociology of Education	Rs 4500-150-5700-200-7300 (minimum Rs 8505/- p m and maximum Rs 12342/- p m)	Sociology or Psychology and considerable research experience in the area of sociology of education
2	<b>READERS</b> (One post each in (a) Dept of Social Welfare Administration, (b) One of the Research Units (Social Sciences) (c) Research Unit for Child and Youth Research, and (d) Dept of Criminology and Correctional Administration	Rs 3700-125-4950-150-5700 (minimum Rs 7505/- p m and maximum Rs 10334/- p m)	(a) Social Work or Rural Management, with 5 years' teaching/administrative experience in Social Welfare/development administration, or Political Science with specialisation in Comparative Political Economy, Sociology of Development with independent applied research work in the field and teaching experience (Those who had applied in response to our advertisement of 8-1-92 need not apply), (b) Industrial or Urban Sociology, (c) Social Work, Home Science with specialisation in Child and Family Relations, or Psychology with specialisation in Guidance and Counselling, (d) Social Work with specialisation in Criminology and Correctional Administration
3	<b>LECTURERS</b> (One post each in (a) Dept of Health Services Studies, (b) Research Unit for Women Studies, and (c) Publication Unit	Rs 2200-75-2800-100-4000 (minimum Rs 4576/- p m and maximum Rs 7805/- p m)	(a) Social Work, Social Science or Management. Candidates with work experience in the area of health preferred. (b) Anthropology/Economics/Social Work/Law, and (c) English Literature/Linguistics/Journalism/Publishing

Prescribed application form can be obtained from the Assistant Registrar (Personnel), either in person or by post by sending an application along with a stamped (Rs. 4 00) self-addressed envelope and the application fee of Rs. 100/- for Professor, Rs. 75/- for Reader, and Rs. 50/- for Lecturer by Demand Draft drawn in favour of Tata Institute of Social Sciences, Deonar, Bombay. For SC/ST candidates, the same will be supplied free of cost on production of caste certificate. The last date for issue of application form is 31-5-93. Completed application forms together with copies of certificates should reach the Assistant Registrar (Personnel) on or before 20-6-1993.

Dr. S.K. Bandyopadhyay  
REGISTRAR

## Seminar on Adolescent Education

A two-day national seminar on 'Adolescent Education', was recently organised in New Delhi by the National Council of Educational Research and Training (NCERT). The objectives of the seminar were (a) to initiate the process of introduction of adolescent education by discussing its various dimensions in the context of needs and requirements, including strategies specific to different states and regions of the country, (b) to identify the components of adolescent education relevant to the Indian situation, specially in the context of the sensitivity of the subject; and (c) to identify measures and strategies that are required to be adopted for its introduction in a phased manner.

Describing the period of adolescence as an extremely difficult stage of transition from childhood to adulthood, marked as it is by rapid changes – physical, emotional and psychological – and beset with myriad problems, Prof. G. Ram Reddy, Chairman of the University Grants Commission (UGC), who inaugurated the seminar, said the scourge of AIDS had forced the issue of introducing sex education in school curricula.

Acknowledging the sensitivity of the subject, especially in a country like India, where 'talk of sex' continues to be taboo, even in the most advanced of households, the UGC Chairman stressed the need to evolve a carefully researched strategy. But for the spread of the dreaded AIDS, the question of whether or not to introduce sex education in schools could have been postponed, he said.

Moreover, given the present circumstances, there is a large section of parents who want their children exposed to various aspects of adolescent education, since they are rarely exposed to them at home, the at-

titude being one of 'schools should take up the task which parents find themselves unable to do'. He, however, admitted there was a strong section of people, representing the traditional inhibition-ridden Indian society who were fighting hammer and tongs against the introduction of sex education fearing increase in promiscuity. Curriculum planners, therefore, needed to strike a balance and address the issue sensitively, Prof. Reddy added.

Besides considering the various aspects of adolescence education, the experts addressed the issue of whether AIDS education would fit into the framework of such education as well as the question of whether the present society was prepared for sex education being made part and parcel of school curricula.

In his address, the Director of NCERT, Dr K. Gopalan said educationists were coming under increasing pressure to create a desired awareness among young students to cope with their adolescence-related problems. Moreover, there are several sex-related myths and misconceptions among teenagers, out of which they rarely grow, which need to be dispelled.

Identifying the objectives of adolescence education, Dr Gopalan said it hopes to provide authentic information and understanding regarding the process of growing up to students according to their age and prepare them for a normal and healthy sexual life. It also aims at promoting among students a responsible behaviour towards the opposite sex commensurate with the cultural and norms of society, help them understand responsibilities of parenthood and the implications and causes of the AIDS, as well as the preventive measures.

Speaking on the 'Need of Sex Education for Adolescents in India', Dr Prakash Kothari said effective sex education and conditioning the starting point for meaningful communication for larger and more important values relating to sex and healthy human development. Referring to apprehensions of children becoming promiscuous with the introduction of sex education, he said "it is far better to undergo the risks of free discussions of sex rather than bear the unhealthy and traumatic consequences of subdued silence with regard to issues related to sex".

Mr O.J. Sikes put forward a four-point strategy in his paper, 'Adolescence Education: Integration Strategies', which was read out. According to him, if educators hope to influence adolescents, then such education should begin early, in fact much before the child enters the transition phase. Moreover, priorities need to be identified, audio-visual aids should be used for facilitating the introduction of difficult topics and awareness generated. In conclusion, he said, the onus of preparing children to think, should be future-oriented with a positive outlook as well as relate to others in a caring and responsible manner lies on teachers.

Academicians from various parts of the country lobbied for the introduction of sex education in schools to dispel sex-related myths and anxieties prevalent among adolescents. They agreed that the controversy-ridden subject was a must in schools in order to combat sexual deviation, spread of sexually transmitted diseases (STDs) and AIDS, and the host of misconceptions that youngsters had about sex.

At the conclusion of the seminar, several recommendations were made including the need to incorporate emergent adolescent problems like drug abuse, AIDS education and social responsibility of the adolescent.

A recommendation was also made that adolescence education be incorporated as part of the conceptual framework of population, education being introduced in school curricula. Major content areas recommended were sexual health and hygiene at the elementary stage.

Reproductive system, physical, emotional and psychological process of growing up, conception, nutritional needs of the mother and the child, pre-natal and post-natal care, need for delayed marriage, delayed pregnancy, a gap between two child births and AIDS, STD and drug abuse were among other practices recommended.

### **Technology for Economic Development**

The Indian National Science Academy, met recently in New Delhi to discuss the draft technology policy of the Government and to suggest how it could be made more in tune with the aspirations of the people.

Prof C.N.R. Rao, who chaired the meeting, felt that the policy needed to clearly recognise that technology was the most crucial element for economic development, as it could enable the nation to compete effectively in the global market.

"Mere economic liberalisation in the absence of integration of science and technology in the national planning process would be unable to derive the nation a competitive advantage. The policy needed to clearly enunciate that the technology push rather than fiscal manipulation was the need of the nation," Prof. Rao said.

It was further felt that the role and contribution of science and technology could have in alleviating the gigantic national problems of burgeoning population, food security, health and nutrition for all, needed to be explicitly emphasised in the policy.

INSA was of the view that the policy needed to display a better appreciation of the importance of technology in helping the nation realise more from our existing assets and new investments in industry and

endowment in technology.

"Even for technology import the policy should consciously tilt in favour of importing those technologies that help in the exploitation of national resources and skills rather than those that merely exploit the Indian markets.

According to Dr. C.N.R. Rao, human resources, especially Science and Technology manpower was a major resource and the policy should clearly spell out measures for making a career in this field more exciting and attractive for the youth.

"Instead of seeking to enhance the number of S&T manpower, the policy should emphasise on mechanisms for improving the quality of manpower and promoting not only excellence but also relevance in R&D."

The policy, according to the INSA fellows, should seek to stress and prioritise mastery over technology in areas where India as a nation has a comparative factor advantage or is a major stake-holder.

Further, the policy should take advantage of globalisation of economy and internationalisation of manufacturing and R&D to spell out mechanisms that promote strategic alliance between Indian and foreign constituents to synergise their complementarities.

The Government, through the policy, needed to enunciate instruments to create a culture and climate which will encourage and enable the increasing use of technology in agriculture, industry and the service sectors and by the people at large as well.

### **Corpus Fund for Self-Reliance**

Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs) and the Indian Institute of Science, Bangalore will create a corpus fund of Rs 100 crore in the next five years. Contributions and donations from the alumni, faculty, industry, foundations and consultancy work could be considered for this purpose.

The possibility of setting up a corpus fund was discussed at a meeting recently held in New Delhi between the human resource development minister, Mr Arjun Singh, and the directors of the institutes. The meeting was organised to take stock of the role of the institutes in the context of the recent measures for liberalisation and globalisation of Indian economy.

It was felt at the meeting that the recent decision to allow 100 percent tax exemption to contributions made to institutes like IITs and IIMs will facilitate efforts for creating such a fund.

It was suggested that the government should also try and support the corpus fund by suitably matching grants.

It was felt at the meeting that such a fund would make it possible for the institute to offer educational programmes comparable to the best in the world and undertake internationally competitive research. It would also make it possible for them to progressively achieve self-reliance consolidating their resource base and strengthen interaction with the industry.

The need to have a vision plan for each institute which could be developed to promote industry-institute linkage was underlined by Mr Arjun Singh. He stressed on the institutes becoming progressively self-reliant while the government would continue to support their functioning.

The meeting felt that initiatives must be taken for forging greater interaction between the institutes and the industry.

Industry should also accept the responsibility for effective functioning and growth of the institutes in enlightened self interest.

### **Dr. Ambedkar's Birthday Celebrations**

The Dr. B.R. Ambedkar Open University organised the 102nd birthday celebrations of Dr. B.R. Ambedkar in Hyderabad recently. Over 500 persons including employees,



teachers, ministerial staff, etc of the university participated

Inaugurating the celebrations, Sri P Rajam, Minister for Higher Education, Government of Andhra Pradesh, emphasised the need for reservations to bring the downtrodden communities on par with the mainstream. He complimented the Open University for observing the event to disseminate the programmes and thoughts of Dr Ambedkar.

Mr Justice M N Rao, Judge of the Andhra Pradesh High Court, who was the principal speaker, said that by a certain yardstick and

criterion of evaluation, Dr. Ambedkar could be considered a greater son of India than even Mahatma Gandhi if you take into consideration the oppressive conditions of the class to which he was born and the uphill task he had to perform. He said that Dr Ambedkar contributed seminal thoughts to the Indian Economy and his thesis on "National Dividend for India. A Historic and Analytical Study" was awarded the doctorate by the Columbia University in 1916. However, Dr Ambedkar had discontinued his Master's Programme at the London School of Economics because of the termina-

tion of his scholarship. Shri Rao hailed Dr. Ambedkar's contribution to the drafting of the Constitution as also his historic decision to quit the cabinet on the question of the Hindu Code Bill reflecting Dr Ambedkar's uncompromising stand on values and principles.

Prof S Bashiruddin, Vice-Chancellor, who presided, said that this year a conscious effort was being made by the Celebrations Committee to involve every one of the teachers and employees to make this event not just a ritual but a function recognising real service and genuine talent. Prizes were awarded for various competi-

## **DNYAN PRABHODHINI MANDAL**

**Kareem Building  
St. Ines, Panaji, Goa.**

Applications are invited for the following posts in the proposed College of Arts & Commerce to be opened at Kanakona, Goa from June, 1993

1 PRINCIPAL	1 POST
2 LECTURER IN ECONOMICS	1 POST
3 LECTURER IN ENGLISH	1 POST
4 LECTURER IN GEOGRAPHY	1 POST

### **QUALIFICATIONS**

a) For the post of Principal

#### **Essential Qualifications:**

Minimum 10 years of approved teaching experience as a Lecturer at undergraduate and/or postgraduate level, and a postgraduate degree in the relevant subject/ faculty.

#### **Desirable qualification**

M.Phil./Ph.D in the relevant subject /faculty

b) For the post of Lecturer

#### **Essential Qualifications**

(i) A good academic record with at least 55% marks or equivalent grade at Master's degree level in the relevant subject and (ii) Should have cleared the eligibility test for Lecturership conducted by the UGC/CSIR - (J.R F test) or a similar test accredited by the UGC unless exempted

#### **Desirable qualifications**

M Phil /Ph D in the relevant subject

In case candidates having cleared the UGC or exempted from appearing for the test are not available, or found suitable, candidates who have not cleared the test will be appointed purely on a temporary basis.

#### **Scale of Pay**

(a) For the post of Principal	Rs 3700-125-4950-150-5700
(b) For the posts of Lecturers	Rs 2200-75-2800-100-4000

All the posts carry other allowances as prescribed by Goa University and Government of Goa

Applications giving full bio-data and true copies of all certificates and mark sheets from S.S.C onwards, and testimonials, if any, should be sent to the Secretary on the above address within 15 days from the date of publication of this advertisement

Persons who are already employed shall forward their applications through proper channel. Breaks in service, if any, should be accounted for

Candidates may note that posts of Lecturers will be filled in depending upon the available work load



tions organised in connection with the celebrations. These included literacy performance contest for those undergoing literacy classes, sports and cultural events and essay competition in Telugu, Urdu and English.

### **UGC Research Projects for Lucknow Varsity Professors**

Three professors of Lucknow University and two retired professors have been selected by the University Grants Commission (UGC) to work on major research projects. The serving teachers bestowed with this honour are Dr K.K. Kaul, department of western history, Prof S.M. Sayeed, department of political science and Dr (Mrs) Janak Pant, department of education. The retired professors, who have been selected for this prestigious research work, are Dr Malikzada Manzoor Ahmad, department of urdu, and Dr (Mrs) Usha Gupta, department of hindi.

The UGC projects are aimed at improving research studies in the country. The UGC will bear the total cost of the projects and it will have to be submitted within three years. The research scholar will be paid between Rs 1 lakh to 1.25 lakh as grant and he/she will be entitled to have a research officer and two research assistants.

### **Vocational Institute at Bhopal**

A Central Institute of Vocational Education is proposed to be established at Bhopal. The institute will be an apex research and development body under the National Council of Educational Research and Training (NCERT).

The setting up of the institute will give a boost to vocational education in the country. It will provide to the State and Union Territories necessary support for taking up a variety of vocational education programmes.

A joint council of vocational

education had been set up at the national level, with State level counterpart bodies, for laying down policy guidelines, planning and coordination.

### **Ambedkar Chair at HP Varsity**

The Himachal Pradesh University has instituted a chair in the campus for Bharat Ratna Dr Bhim Rao Ambedkar. This was revealed by the Vice-Chancellor of the University, Prof. K C. Malhotra, while inaugurating a symposium on Dr. Ambedkar in Shimla recently. He said that the campus already had an arts block named after him.

Besides, a seminar on Dr Ambedkar would be organised in May where eminent educationists and personalities would be invited, Prof. Malhotra said.

### **UGC National Fellowship Awards**

Eleven eminent teachers from nine universities have been selected by the University Grants Commission (UGC) for national fellowships enabling them to take a year or two off from their normal academic duties for devoting themselves exclusively to research.

The selected teachers are in history, Dr Yellapragade Sudershan Rao, (Kakatiya) and Prof K.S Mathew (Pondicherry), in psychology, Prof (Mrs) Anima Sen (Delhi) and Dr Rita Agarwal (Guru Nanak Dev), in linguistics, Dr I Venkateswara Sastry (Osmania), in com-

merce, Prof R.S. Nigam, (Delhi), in zoology, Prof. T. Subramaniam (Madras), Prof S.K. Malik (Mathematics) and Dr R.K. Gupta (Physics), both from Panjab; Dr R.K. Raj, (Kerala) (bio-chemistry) and Dr Indrani Chakravarti, (Himachal Pradesh), (music).

### **IGNOU Launches New Courses**

The Indira Gandhi National Open University (IGNOU) is reported to have decided to introduce two courses, one on child-care services and another on nutrition for the community, from this year.

These courses have been introduced to encourage people to take up self-employment activities.

### **Ambedkar International Award**

Prime Minister Mr P.V. Narasimha Rao recently announced the Government decision to institute the Ambedkar International Award for outstanding work for promotion of social equality and human dignity. This prestigious Rs 15 lakh award would be in addition to the Rs 10 lakh Ambedkar National Award.

Mr Narasimha Rao also announced that the Dr B R. Ambedkar University at Lucknow would be converted into a Central university. He said that the proposal for setting up a Dr Ambedkar Memorial at Alipur Road, Delhi, where Baba Saheb breathed his last, was being actively pursued by the Welfare Ministry.

## **News from Agricultural Universities**

### **PAU Introduces New Courses**

The Punjab Agricultural University is reported to have introduced internship programme in B.Sc (agriculture) degree on the pattern of medical and veterinary sciences. This will improve the competence of B.Sc

(agriculture) graduates in solving practical problems of farmers. The university has started new M.Sc programmes in veterinary biochemical physiology, sugar technology, sugar engineering and agro-industrial

processing. Ph.D programmes have been started in agro-meteorology and home management. In all, the university now offers 52 masters-level courses and 42 Ph.D. programmes in 47 departments thus making it the largest institution of higher learning in agriculture and allied sciences.

According to Dr D.S. Sidhu, Dean, Post-Graduate Studies and Professor of Marketing, during the year 315 and 106 students (including students from other states) were admitted in various M.Sc. and Ph.D. programmes respectively, offered by the university. The admission to the MBA programme is done on the basis of an all India competitive examination. The number of graduates who completed their degrees during this period is 243 and 63.

The curricula for various programmes have been updated laying more emphasis on simulation modelling, communication technology, computer applications and vocational courses. Dr Sidhu disclosed that specialised courses on aspects like "how to establish and manage small agricultural business" have been made an integral part of the course curriculum.

In order to improve communication skills among its graduates, the university has introduced "Dr Sukhdev Singh awards" for best oration. The awards, named after the former Vice-Chancellor of PAU, carry a total amount of Rs 12,000 per annum and will be awarded to two M.Sc. and Ph.D. students each w.e.f. the current academic year.

In order to encourage excellence in its academic programmes, two gold medals have been instituted named after eminent agricultural scientists, the late Dr K. Kirpal Singh and Dr G.S. Gill. Endowments have been created to introduce attractive fellowships in the areas of integrated pest management and plant pathology.

### American Aid for TNAU

Three American institutions, including the Ford Foundation, are reported to have sanctioned a grant

of \$120,000 to the Tamil Nadu Agricultural University for new research projects.

The Ford Foundation had approved a grant of \$58,000 for a two-year collaborative research on management of tank irrigation system by the Government and local bodies.

The Winrock International had given a grant of \$32,500 for the development of agro-forestry and another \$20,000 for undertaking a study on natural resource economics.

The International Food Policy Research Institute, Washington, had provided \$10,000 for a study on projection and policy implications of medium and long-term rice supply and demand, the release said.

### New Fruit Crops Varieties

The Department of Horticulture of the Punjab Agricultural University has made significant contributions for

the development of horticulture in the region. Efforts are now being made on improvement in varieties of various fruit crops for fresh consumption, processing and export.

Dr Satjit Singh Grewal, professor and head of the department, said new varieties suitable for fresh consumption and processing in peach (Par-tap), plum (Sutlej purple) and papaya (Punjab sweet, pusa dwarf, pusa delicious and papin rich variety) have been released. The work on the development of soft pears (Babbugosha) has resulted in large number of indigenous and exotic selections and three varieties are in an advanced stage of release. An air-conditioned computerised leaf analysis laboratory has been established in the department where latest equipment such as atomic absorption, flow injection analyser and spectrophotometer have been installed. This laboratory will be a boon to the state orchardists as the nutritional needs of their orchards, both for macro and micro elements, will be determined through foliar analysis.

## News from UGC

### Countrywide Classroom Programme

Between 8th May to 14th May, 1993 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

#### 1st Transmission

1.00 p.m. to 2.00 p.m.

**8.5.93**

"Old Masters"

"New Horizons"

"The Week Ahead"

**9.5.93**

No Telecast

**10.5.93**

"The Origins of Quantum Theory. From Planck to Bose - IV"

"TIMA - Quest for Excellence - I"

"Sustainable Agriculture by Daring Farmers - I."

**11.5.93**

"Reflections on a Career in Polymer Chemistry"

"Lifeline - Treatment in Cancer, An Indigenous Effort"

"Contract Act - II"

12.5.93

"The Dinosaur – V. The Extinction of Dinosaur"	13.5.93	"Sculptural Art of the Pallavas"	Shakespeare"
"Control System – II"		"Data Structure – I. Stack"	"Soil Erosion"
		"John Clifford on William"	14.5.93
			"Newspaper"

# NCERT

## POST-GRADUATE DIPLOMA COURSE IN GUIDANCE AND COUNSELLING

### ADMISSION ANNOUNCEMENT : 1993-94

Applications are invited for admission to a Post-Graduate Diploma Course in Guidance and Counselling offered by the NCERT for the session 1993-94. The Course will commence on 3rd August, 1993.

Admission to the Course is on all India basis. Admission test and interview will be held on 10th June, 1993 at Allahabad, Bangalore, Bhubaneswar and New Delhi. Candidates may take the Admission Test in English or Hindi. Exact venue of the test and interview will be intimated to the candidates by post. No TA/DA will be paid for appearing in the admission test.

**DURATION OF THE COURSE** 9 months

**SEATS** 36

**SCOPE** Candidates after passing this Course will be eligible for recruitment to the post of Guidance Counsellor in the schools, State Bureaux of Guidance and Child Guidance Clinics etc.

**ELIGIBILITY** Master's degree in Psychology or Education with atleast 55% marks. Relaxation of 5% marks for SC/ST candidate is allowed.

**AGE** Preferably below 40 years as on date of admission.

**SCHOLARSHIP** Scholarship of the value of Rs 500/- per month will be awarded on merit to the first 25 candidates admitted to the Course. All candidates admitted against the SC/ST quota will be eligible for the award of scholarship. Deputed candidates interested in the award of scholarship will have to qualify in the All India Selection Test.

**RESERVATIONS** 15% seats are reserved for Scheduled Castes and 7½% of seats for Scheduled Tribes.

**HOW TO APPLY** Applications on plain paper mentioning the following details along with attested copies of marks sheets, and SC/ST certificates wherever applicable should reach at the address given below **LATEST BY 17TH MAY, 1993**

1 Name (in block letters) 2 Sex 3 Address 4 Date of birth 5 Educational qualifications (in a tabular form) mentioning examinations passed, name of the University, percentage of marks, year of passing, papers/subjects offered 6 Experience, if any 7 Proposed centre for taking the admission test.

#### NOTE

1 Preference will be given to candidates sponsored by the state education departments and schools under the Registered Societies, subject to an undertaking by the employer that after passing the course, the candidate's services will be utilized in the area of guidance atleast for a period of three years.

2. Those in service should send their application through proper channel.

3 Applications incomplete in any respect will not be considered.

4. Medium of instruction for the Course is both English and Hindi.

5. Limited hostel facilities are available.



Head  
Department of Educational  
Psychology, Counselling & Guidance  
National Council of Educational Research and Training  
Sri Aurobindo Marg  
New Delhi-110016

date 22/5/93

"Starfinder – II Pictures from Numbers"

"Motivation for the Pursuit of Science – I"

#### Ind Transmission

4.00 p.m. to 5.00 p.m.

**8.5.93**

No Telecast

**9.5.93**

No Telecast

**10.5.93**

"Liquid Crystal – II"

"Management Functions and Behaviour · Leadership Styles"

"Wonder Working Light"

**11.5.93**

No Telecast

**12.5.93**

"Child · Growth and Development Problem of the New Born"

"Ways of Thinking – I Mind Matters"

"Communicating Through Black Board"

**13.5.93**

"Electronics – V. Amplifier"

"Sticks in Rhythm"

19th Century Russian Literature : M.Y. Lermontov"

**14.5.93**

"New Horizons"

"Zero Gravity Caravelle"

"The Week Ahead"

## Society for Educational Advancement

The American Biographical Institute Research Association (ABIRA), established in 1979, is a learned society of professionals who are devoted to the principles of educational advancement and to the cultural enrichment of human life in all its many facets. It is an organization dedicated to those who have contributed their energy and leadership to the growth of national and international communities and who have thereby advanced the quests of humankind.

Dr Adaikkalam Subbian, Professor & Head, Department of History, Annamalai University, 5 Professors Quarters, Annamalainagar 608002, Tamil Nadu, India has been made member of the Board of Governors of the Association and designated as Deputy Governor. He may be contacted for more details about the Association.

The Association's Headquarter is located at 5126 Bur Oak Circle, P O. Box 31226, Raleigh, North Carolina 27622 USA.

## CALENDAR OF EVENTS

Proposed Date of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/ Officer to be contacted
May 25-27, 1993	Sixth Annual Conference of the All India Association for Educational Research	Theme: Research in Educational Management	All India Association for Educational Research in collaboration with St Ann's College of Education, Mangalore	Dr (Sister) Lydia Fernandes A C, Principal, St Ann's College of Education, Mangalore
1st Week of June, 1993	Annual Conference of Indian Academy for Instructional Planning	Theme: Instructional Planning – an educational rethinking	Pravara Rural College of Education, Pravaranagar, Dist. Ahmednagar	Dr P L. Karkare Secretary, IAIIP, BEd College Loni (Pravaranagar) Dist Ahmednagar-413712



# THESES OF THE MONTH

## A list of Doctoral Theses accepted by Indian Universities

### BIOLOGICAL SCIENCES

#### Anthropology

- 1 Parkash, Mohinder A comparative demographic study of high altitude and low altitude Bods of Himachal Pradesh. Delhi.

#### Environmental Sciences

- 1 Mohana Chandran, G Distribution, fractionation and deposition of heavy metals in the sediments of three major Peninsular estuaries (Godavari, Krishna and Cauvery) and associated coastal regions. JNU Prof V Subramanian, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi

- 2 Rai, Vikas Order and chaos in ecological systems. JNU Prof L K Pande, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi

#### Marine Sciences

- 1 Chattopadhyay, Gautam Investigation on the lipid profiles of the estuarine bivalve, *Macoma birmanica* Philippi of the Sunderbans mangrove complex, India. Calcutta

- 2 Mishra, Jayant Kumar Embryonic development and variations in the haemolymph of Indian horse-shoe crab, *Tachypleus gigas* Muller Berhampur Dr A H Parulekar, Head, Biological Oceanography Division, National Institute of Oceanography, Dona Paula Goa

- 3 Mishra, Pravakar Studies on some aspects of coastal processes at Gopalpur, South Orissa. Berhampur Dr A S N Murty, Department of Marine Sciences, Berhampur University, Berhampur

- 4 Vijayakumar, S Studies on biochemical genetics of the grey mullet, *Mugil cephalus Linnaeus*. CUST Dr M K George, Scientist, Central Marine Fisheries Research Institute, Kochi

#### Biochemistry

- 1 Bandyopadhyay, Purnima Characterisation of log and stationary phase promastigotes of *Leishmania* spp based on morphological, biochemical and immunological aspects. Calcutta

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- 3 Nalini, S Lipid metabolism: Lipid peroxidation - possible role in the intestinal epithelial cell damage Madras.

- 4 Pal, Mita Studies on contractile proteins in higher plants. Calcutta

- 5 Ragupathi, G. Immunological methods in analytical biochemistry: Development of dry phase enzyme-linked immunosorbent assay for *Cleistanthus collinus* toxins. Madras.

- 6 Sreenivasan, R. Studies on tumour markers using murine models. Madras.

- 7 Vasandani, Veena M Liposomes as vehicles for delivery of carboxylic ionophores in vivo. Delhi

#### Biophysics

- 1 Mohan, S. Modelling of DNA-drug interactions and sequence dependent properties of DNA. Madras

#### Biotechnology

- 1 Venkataraman, C. Waste-utilisation by phototrophic bacteria for (i) biomass and H<sub>2</sub> production and (ii) removal of heavy metals. Madras.

#### Microbiology

- 1 Bholay, Avinash Dineshkumar Investigation of microbial degradation of cresols present in waste waters by soil bacteria. Nagpur Dr A O Ingie, Reader, Department of Microbiology, Nagpur University, Nagpur and Dr N M Parhad, Asstt Director (Retd), National Environmental Engineering Research Institute, Nagpur

- 2 Gayatri, R. Effects of pesticides on growth and development of cellular slime moulds, *Dictyostelium discoideum*. JNU Prof S Chatterjee, School of Life Sciences, Jawaharlal Nehru University, New Delhi

- 3 Lakshmi Rani, N Catabolic versatility of *Pseudomonas putida* in organophosphorus pesticides degradation. Madras

- 4 Prabhu, Anila Modulation of immune reactivity of *Mycobacterium tuberculosis* antigens by chemical and enzymatic modifications. JNU Prof R K Saxena, Assoc Prof, School of Life Sciences, Jawaharlal Nehru University, New Delhi.

- 5 Rauf Latif Viruses and rheumatoid arthritis. An immunological evaluation. Madras

#### Botany

- 1 Anita, C V Genotypic and molecular basis of salt tolerance in *Oryza sativa* L, and *Porteresia coarctata*. Osmania.

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- 4 Dattamajumdar, Paramita Studies on some fungi associated with the decomposition of felled bamboo. Calcutta

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- 7 Inderjit Singh The nature of the interference potential of the weed, *Pluchea lanceolata* (DC) C B Clarke (Asteraceae). Delhi

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11 Nayak, Ashok Kumar Impact of accumulated photothermal units on phenology, morpho-physiological attributes and productivity in soyabean, *Glycine max* (L) Merrill. H S Gour Dr D C Atri, Reader, Department of Botany, Dr Hari Singh Gour Vishwavidyalaya, Sagar

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14 Remila, K G Physiopathological studies on phylloxy disease of black pepper, *Piper nigrum* Linn. Calicut Dr N Neelakandan, Department of Botany, University of Calicut, Calicut

15 Saxena, Saumya Post translational regulation of RNA polymerase II through phosphorylation of its two large subunits in dwarf pea epicotyls. Delhi

16 Singh, Jagdish Effect of cultural practices and inter cropping on the growth and economic yield of mango orchard, cv langra Ghasidas Dr D D P Sharma Govt Girls Postgraduate College, Bilaspur

#### Agriculture

1 Ghosh, Sisirkumar Genetic analysis of quantitative characters in lentil, *Lens culinaris* Medik. Calcutta

2 Khare, Sadhna Physiological aspects in drought tolerance of *Leucaena* and *Albizia* species. Jiwaji Dr R B R Yadav Principal Scientist and Head, Plant Physiology Division Central Institute of Horticulture for Northern Plains, C-217 Indira Nagar, Lucknow and Dr R R Das, Department of Chemistry, Jiwaji University Gwalior

3 Narula, Satish Kumar Standardization of nutrient ranges in pear, *Pyrus pyrifolia* (Burm) Nak. Y S Parmar Dr H S Verma Assoc Director (Research) Regional Horticultural Research Station Bajaura

4 Singh Devender Jeet Response of potassium application in tomato, cucumber, ginger and cauliflower Y S Parmar Dr K K Singh, Department of Vegetable Crops College of Horticulture, Nauni

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6 Tajinder Singh Components of resistance in wheat to Karnal bunt, *Neovossia indica* (Mitra) Mundkur PAU

7 Tiwari, Ramjit Application of gypsum ( $\text{Ca}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}$ ) on a salt affected clay soil with particular reference to some varieties of cotton crops. Jiwaji Dr K Dwivedi, Reader, Department of Chemistry, Jiwaji University, Gwalior and Dr S K Verma

#### Zoology

1 Balachandran, B Mutagens and carcinogens in some Indian food fishes and vegetables Madras

2 Balashouri, P Enzymatic methods for detection and determination Ecotoxicology and environmental monitoring of select heavy metal compounds. Kakatiya Dr (Mrs) Y Prameela Devi Lecturer Department of Zoology University Arts and Science College Warangal

3 Das, Mala. Comparative studies on excretory system in some gastropod molluscs from different habitats. Calcutta

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5 Fuladi, Rajesh Sunderlal Histopathological and biochemical effects of some drugs on gonads and endocrine glands of grey quail *Coturnix*, *Coturnix coturnix* Linn. Nagpur Dr D R Patil Department of Zoology, Nagpur University, Nagpur

6 Gulati, Anita Histochemical, biochemical and ultrastructural studies of flight and leg muscles of some insects with special reference to SDH and m-ATPase Delhi

7 Jayanth, K P Bioecological and physiological studies on the insect, *Zygogramma bicolorata* P and evaluation of its potential in controlling the weed, *Parthenium hysterophorus* L. Bangalore Dr Geetha Bai, Reader Department of Zoology, Bangalore University Bangalore

8 Jeevanandam, T Investigation on some aspects of reproduction by the females of hard tick *Haemaphysalis intermedia* Warburton and Nuttall, 1909 (Acarina Ixodidae Ixodidae) Madras

9 Jha, Manju Rani Cytological studies on replication in mosquito polytene chromosomes. Bangalore Dr B V Chowdiah 10, 4th Block, Kumarapark West Bangalore

10 Mahajan, Shashi Kant Physio-chemical characteristics of soil water in relation to plankton production with special reference to fish seed farm. Durgawati Dr A K Mandloi Head Department of Fisheries, Jawaharlal Nehru Krishi Vishwavidyalaya Jabalpur

11 Mahalingam V Studies on plant correlated biological response of *Atractomorpha crenulata* Fabricius (Insecta Orthoptera: Pyrgomorphidae) Madras

12 Mishra, Anjana Development of *Schistosoma spindale* and *S indicum* in laboratory and their diagnosis in final hosts. Durgawati Dr M C Agrawal, Assoc Prof Department of Parasitology College of Veterinary Science and Animal Husbandary, Jabalpur

13 Mujumdar Rina Ranjit Development of endocrine glands in the lizard, *Calotes versicolor* Nagpur Dr D M Dubewal Department of Zoology, Nagpur University Nagpur

14 Sasi Kumar Nambiyath Ecology and control of biofouling in a coastal power station with special reference to *Megabalanus tintinnabulum* L. Madras

15 Satyanarayana, M Histological and histochemical studies in the silkworm, *Bombyx mori* L. Kakatiya Dr T Rajendranath, Prof, Department of Zoology, Kakatiya University, Warangal

16 Sayeeda, N S Immunotoxicity of acrylamide monomer in male albino rats. Madras

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18 Sundar Ram M J Studies on the biology of *Rana curtipes* Jerdon (Anura, Amphibia) Bangalore Dr Katre Shakuntala, Prof, Department of Zoology, Bangalore University Bangalore

19 Suresh Babu, V Effects of some anthelmintics on biochemical aspects of *Rastellina tetragona* (Molin, 1858). Kakatiya Dr G Raghu Ramulu, Department of Zoology, Kakatiya University, Warangal

20 Varghese, Thresiamma Studies on *Cyclosa confraga* Thorell (Araneae, Araneidae) Calicut Dr T C Narendran, Department of Zoology, University of Calicut, Calicut

21 Vasanth, N Studies on the grey mullets (*Pisces: Mugilidae* of Pulicat Lake (Tamil Nadu, S India). Madras.

#### Medical Sciences

1 Babhulkar, Sudhir Shankarrao Factorial study of recovery rate in patients of sickle cell haemoglobinopathies with skeletal involvement. Nagpur

2 Dudani, Usha S Role of Sahaja yoga in the management of epilepsy Delhi

3 Kausalya, S Metabolic responses of Kupffer cells and migratory inflammatory cells, monocytes before and after drug therapy in experimental visceral leishmaniasis. PGI

4 Kohli, Minni Effect of heat-labile and heat-stable enterotoxins of *Escherichia coli* on enterocyte membrane and cytosolic enzymes in mice. PGI

5 Mohan, V P Studies on plasmid associated virulence phenotypes in *Salmonella typhimurium*. Delhi

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7 Panda, Prasana Kumar A study of morbidity of children under five years in a tribal area of South Orissa. Berhampur Dr B C Das, Assoc Prof, V S S Medical College, Burla

8 Purushotham Rao, K. Studies on some pharmaceutical formulations. Gulbarga Dr (Mrs) K M Sanghavi, Reader, Department of Pharmacy, University of Bombay, Matunga Road, Bombay

9 Ramakrishna, B Siddhartha Absorption of water and electrolytes by the colon. Studies in diarrhoeal disease Madras

10 Shekher Archana Effect of various pharmacological interventions on reperfusion induced arrhythmias. PGI

11 Shrivakumar, B R. Cellular protectants in the central nervous system. Bangalore Dr Vijayalakshmi Ravindranath, Asstt Prof, Department of Neurochemistry, National Institute of Mental Health and Neuro Sciences, Bangalore

12 Sushumna Role of  $Ca^{2+}$  - calmodulin and protein kinase C in the pathogenesis of diarrhoea in experimental giardiasis. PGI

13 Venkata Ramana, D Pharmacokinetic studies on D (+) usnk acid. Kakatiya Dr D R Krishna, University College of Pharmaceutical Sciences, Kakatiya University, Warangal

#### Veterinary Sciences

1 Ameerjan, K Studies on the cardio-pulmonary, haematological, biochemical and histopathological changes of ketamine, xylazine anaesthesia in calves. T N Vet Dr M S Gopal, Prof and Head, Department of Surgery, Veterinary College and Research Institute Namakkal

2 Bhakt, Rabindra Influence of urea treatment on the nutritive value of sal, *Shorea robusta* seed meal and sal leaves as a feed ingredient for livestock. Birsra Agri.

3 Chandran, N Daniel Joy Studies on rinderpest virus. T N Vet Dr R A Venkatesan, Prof and Head, Department of Microbiology, Madras Veterinary College, Madras.

4 Cyrus, Inbaraj Toxicodynamics of organophosphorus pesticides with reference to noradrenergic system. TN Vet Dr S Jayasundar, Prof and Head, Department of Pharmacology, Madras Veterinary College, Madras

5 Madhav, A Bindu A study on recordings of cardiac manifestations in frothy bloat before and after treatment with selected newer anti frothing agents in bovines. T N Vet Dr V Gnanaprakasam, Vice Chancellor, Tamil Nadu Veterinary and Animal Sciences University, Madras.

6 Padmanabha Reddy, V Studies on the starter characteristics of dairy Lactococci with special reference to plasmids. T N Vet Dr M Mohd Habibulla Khan, Director, Department of Extension Education, Tamil Nadu Veterinary and Animal Sciences University, Madras

7 Poovannan, P V Genotoxic evaluation of pesticides and their effect on post-natal growth and feeding pattern in mice. T N Vet Dr S Jayasundar, Department of Pharmacology, Madras Veterinary College, Madras

8 Rahumathulla, P S Genetic analysis of milk records of Jersey crossbreds in Tamil Nadu. T N Vet Dr N Natarajan, Dean, Madras Veterinary College, Madras

9 Rajni, Roberts Asha Influence of dietary energy level, form of feed and season on the performance of caged broilers. T N Vet Dr R Kumara Raj, Prof, Department of Poultry Science, Madras Veterinary College, Madras.

10 Saravanabava, K. Studies on blue tongue virus in sheep T N Vet Dr R A Venkatesan, Prof and Head, Department of Microbiology, Madras Veterinary College, Madras

11 Selvasubramanian, S Toxicodynamics of organophosphorus pesticides with reference to dopaminergic system. T N Vet Dr S Jayasundar, Prof and Head, Department of Pharmacology, Madras Veterinary College, Madras

12 Sudhakara Reddy, P Studies on the nutritive value of foxtail millet, *Setaria italica* for chicken. T N Vet Dr D Narahari, Prof Department of Poultry Science, Madras Veterinary College, Madras

13 Talukdar, Jitendra Kumar Studies on the performance of chicken with lacto bacillus based probiotics. T N Vet Dr V Sundararasu, Director of Research, Tamil Nadu Veterinary and Animal Sciences University, Madras

14 Thilagar, S Myelography in dogs. A comparative study using iohexol and iopamidol. T N Vet Dr M S Gopal, Prof and Head, Department of Surgery, Veterinary College and Research Institute, Namakkal

15 Thyagarajan, D Studies on ochratoxins in chicken T N Vet Dr V Sundararasu, Director of Research, Tamil Nadu Veterinary and Animal Sciences University, Madras



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A list of select articles culled from periodicals received in AIU Library during April 1993

## EDUCATIONAL PHILOSOPHY

Baskett, H K Morris and others. Putting theory to practice and practice to theory *New Directions for Adult and Continuing Edn* 55, (Fall) 1992, 109-18

Parameswaran, B G A crisis of identity Higher education. *Progressive Ednl Herald* 7(1), 1992, 76-8, 82.

Savari Raj, G A. Education for enlivening the endangered earth Reflections on the earth summit *New Frontiers in Edn* 22(4), 1992, 624-38

Sheth, N R. Values in search of education *J of Edn & Social Change* 6(1), 1992, 1-17

## EDUCATIONAL PSYCHOLOGY

Farmer, James A and others. Cognitive apprenticeship Implications for continuing professional education *New Directions for Adult and Continuing Edn* 55, (Fall) 1992, 41-9

Fraser, Barry J and others. Assessment of the psychosocial environment of university science laboratory classroom A cross-national study *Hr Edn* 24 (4), 1992, 431-51

## EDUCATIONAL SOCIOLOGY

Parvathamma, C. The clamour for reservation *J of Edn & Social Change* 6(1), 1992, 18-28

## EDUCATIONAL PLANNING

Tilak, Jandhyala B G. Budgetary reforms and subsidies in higher education *Eco & Pol Weekly* 27(6) 1993 245-8

Umamaheswar, A R. Human resources development in higher education

*Bulletin Madras Devp Seminar Series* 22(12), 1992, S 106-14

## WOMEN'S STUDIES

Nagarajan, N. Women's status and role in population education *Indian J of Adult Edn* 53(2), 1992, 49-53

Yamaguchi, Makoto. Women's education and empowerment *Indian J of Adult Edn* 53(1), 1992, 72-9

## EDUCATIONAL ADMINISTRATION

Gilmour, Joseph E. Participative governance bodies in higher education Report of a national study *New Directions for Hr Edn* 19(3), 1991, 27-39

Orlans, Harold. Accreditation in American higher education The issue of "Diversity" *Minerva* 30(4), 1992, 513-30

Ravindra Prasad, D. Autonomy and accountability in higher education Some aspects *Progressive Ednl Herald* 7(1), 1992, 56-63

Sangameswara Rao, D. Role of public and private sectors in the management of education A historical perspective *Progressive Ednl Herald* 7(1), 1992, 34-7

Shils, Edward. The progress of affirmative action Accreditation and diversity *Minerva* 30(4), 1992, 531-69

Twombly, Susan B. The process of choosing a dean *J of Hr Edn* 63(6), 1992, 653-83

Williams, Bruce. Rise and fall of binary system in two countries and the consequence for universities *Studies in Hr Edn* 17(3) 1992, 281-93

## TEACHERS & TEACHING

Mani, R S. Teacher education in India Some significant dimensions *Progressive Ednl Herald* 7(2) 1993 26-31

Mohanty, Jaganath. Accountability in education *Progressive Ednl Herald* 7(1), 1992, 17-33

## EDUCATIONAL TECHNOLOGY

Lamb, Annette C. Multimedia and the teaching-learning process in higher education. *New Directions for Teaching and Learning* 51 (Fall) 1992, 33-42.

Launillard, Diana. Learning through collaborative computer simulations. *British J of Ednl Tech* 23(3), 1992, 164-71

Randall, James P. The emerging potential of virtual reality in postsecondary education *New Directions for Teaching and Learning* 51, (Fall) 1992, 77-81

## EDUCATIONAL EVALUATION

Ediger, Marlow. Approaches to measurement and evaluation *Studies in Ednl Eva* 19(1), 1993, 41-50

Van Kesteren, Baukje J. Applications of De Groot's "Learner report" A tool to identify educational objectives and learning experiences *Studies of Ednl Eva* 19(1), 1993, 65-86

## ECONOMICS OF EDUCATION

Balachander, K K. Funding of state universities in India Some crucial issues *J of Ednl Plann and Admn* 5(3), 1991, 285-99

Biswal, Kamalakanta. Urban labour market experiences of young-adults in India Some theoretical observations *J of Ednl Plann and Admn* 5(3), 1991, 259-84

Ekbote, Gopal Rao. Public investment in higher education and the problem of brain drain *Progressive Ednl Herald* 7(1) 1992 8-10

Ghosh, D and Mallier, Tony. Student finance The contribution of the long vacation *Hr Edn Rev* 25(1), 1992, 45-56

Rapple, Brendan A. A victorian experiment in economic efficiency in education *Eco of Edn Rev* 11(4) 1992, 301-16

Shiva Reddy, B. Financing of education and health in India *J of Ednl Plann and Admn* 5(4), 1991, 361-81

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Dulyakasem, Uthai. Adult education in the coming decade *Indian J of Adult Edn* 53(1), 1992 27-31

Mason, Robert C. Adult and continuing education should be market driven *New Directions for Adult and Continuing Edn* 54 (Summer) 1992, 77-83

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## DISTANCE EDUCATION

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